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ADDRESSES.

THE AMERICAN MEDICAL ASSOCIATION: ITS ORIGIN, PROGRESS AND PURPOSE.^{1,2}

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BOTH established usage and the by-laws of this Association require the presiding officer to deliver annually an address touching such matters as he may deem of importance. In the early years of the Association the President's address was devoted to an epitome of the progress of medical science in its various departments during the preceding year. Since distinguished orators are now selected annually to perform this important service, the President's address may be more appropriately directed to subjects relating to the general welfare of the profession and to the purposes for which this great organization was established.

The annual session of the American Medical Association is always an occasion of special moment and universal interest in the medical profession of America. That several thousand physicians from all sections of our broad country assemble annually for the advancement of medical science and the elevation of our profession is a splendid testimonial to the earnestness of professional achievement and aspiration. The occasion cannot but command the respect of all who are concerned in the progress of science and the betterment of the human race. The spirit which pervades such an assemblage is the desire for improvement, for the increase of scientific resources, and for the diffusion of medical knowledge. Closely related to these ennobling purposes is that social instinct of our profession, which would elevate and be elevated by interchange of views resulting from common experiences, and by mingling together in pleasant friendly intercourse. Happily our present meeting is held under ideal conditions for the exercise of all the functions of such an organization. Perfect harmony prevails. The differences which at times have divided us have all been satisfactorily adjusted; and we are to-day as one man in our united effort to advance the science of medicine, to enlarge the scope of its beneficence, and to promote the welfare of our profession.

Since our meeting at Atlantic City one year ago, many of our members have ceased their labors and passed to the great beyond. The list is a long one. Among the number is that of Nathan Smith Davis. He was one of the

founders of this Association, an ex-president; a member of the Board of Trustees, the first editor of the *Journal of the American Medical Association*, and for years a power for good in its affairs. He lived beyond the time allotted by the Psalmist, and all his years were filled with labor and with honor. I will not undertake at this time to estimate adequately his great services, or appropriately to pay tribute to his memory. This will be done later in the session by one better prepared than I to eulogize our departed leader.

At our last session, Dr. B. C. Pennington, of Atlantic City, was chairman of the Committee of Arrangements. He was honored with the fourth vice-presidency in recognition of his ability, his high professional standing, and his devoted services to this Association. His name, too, is now found among the year's honored dead. A cultured gentleman, a learned and accomplished physician, his memory will ever remain as an inspiration for high ideals and noble endeavor.

Early Years.—When the American Medical Association was organized in 1846 it is doubtful if there were more than 25,000 physicians in the entire United States of America. It was organized as a representative body, composed of delegates from affiliated societies, colleges, and hospitals throughout the States. It was a body of delegates from all State, district, county and other medical societies which adopted the code of ethics of the national association. The apportionment of delegates was on a basis of one for every ten members of the societies represented. For a number of years the delegate body thus constituted was not too large for the discussion of important subjects and the ready transaction of business.

With the rapid increase in population, the admission of new States to the Union, and the settlement of new Territories, came a vast increase of physicians, with a corresponding multiplication of State and county societies. Without change in the apportionment of delegates, the national association developed into a body too large and unwieldy for the transaction of business. Indeed, during the latter years under the original system of organization, practically every member in attendance on the annual sessions was a delegate. While the work of the sections was carried on with increasing excellence, the important functions relating to legislative and other matters, belonging to a great national organization of the medical profession, were neglected. The general sessions brought together hundreds of delegates, forming a convention so large that thorough discussion of important questions and judicious action on the same became practically

¹ President's Address, at the Fifty-sixth Annual Session of the American Medical Association, at Portland, Oregon, July 11 to 14, 1905.

² Courtesy of the Journal of the American Medical Association.

impossible. Moreover, the delegates attending the annual sessions constituted a body annually changing in personnel; and the sources of attendance changed with the sections of the country in which the meetings were held. In consequence there could be neither that equal representation of all sections which must obtain in a national body, nor continuation of work from year to year along definite lines.

The Sections.—During these early years it was the steady improvement in the work of the sections which drew the best element of the profession to the annual sessions. Many leaders of the profession in the various States attended the sections in which they were interested, and took no part in the proceedings of the general meetings. The sections have now reached such a high degree of efficiency that they have attained the standard so much desired, and rank as leading special national societies in the several departments of medical science which they represent.

As chairman of the Committee on Sections and Section Work, I have carefully studied the workings of the sections. As a result of this experience, I would repeat the recommendation of my distinguished predecessor in this chair, that the secretary of each section should be elected for a term of years. No national society can maintain its efficiency which changes its secretary annually. And again, I would suggest that the officers of the several sections meet together in conference as soon as practicable after the adjournment of the session at which they are elected, in order that definite plans may be formulated for the scientific work of the next annual session. The conference of section officers in New York last November contributed much toward the development of the admirable scientific program now before you for the present session.

It should be the aim and purpose of every member of this Association to aid the officers of the sections in elevating continually the standard of scientific work. Every American physician may have pride in the work done year after year in the sections of this Association.

The Journal.—It would be a difficult task were we to undertake a definite estimate of the influence of *The Journal* in the great work which this Association has accomplished during the past two decades. When it was decided to discontinue the annual volume of transactions, and to establish a weekly journal, the change was viewed with apprehension by many. The influence of this publication, the property of the Association, in stimulating research, diffusing knowledge, elevating professional thought and conduct, and building up this great organization cannot be computed. This part of my discourse is so replete with suggestion, that I fear the time and space at my command will not permit such consideration as should be devoted to it.

The volumes of *The Journal* mark the steady and continued growth of the Association, and

likewise bear testimony to the fact that *The Journal* itself has been a potent factor in that growth. Under the judicious direction of the Board of Trustees *The Journal* has steadily advanced as a scientific publication. By the untiring daily services of the present able Editor, it has leaped into the very front rank of scientific publications, and in all that a great weekly medical journal should be it has no superior in the world. The power exerted by such a publication as a medium of communication among the members of the Association is inestimable, to say nothing of the other more important functions performed by a great weekly journal. It has been the most potent instrument in building up this Association to its present proud position as the largest medical organization in the world. No other American medical periodical has a circulation so distinctly national, and no other journal can sustain the same relation to the great body of the medical profession. It is a great engine whose power is constantly increasing, constantly extending. With such increased power comes increased responsibility, much of which rests with the House of Delegates in the selection of proper men to fill the responsible places of the trustees. No other office should be regarded higher in honor than that of the trustees, as no other affords greater scope for unselfish labor and efficient service to the Association. Under the conditions of our organization more power is invested in this board than the combined power of all other officers.

The New Era.—At the annual session of 1900 a committee on reorganization was appointed, and one year later, at St. Paul, the report of the committee was submitted and adopted. It included a new constitution, which altered the basis of apportionment for delegates, so as to reduce the delegate body to 150, and definitely established a close relationship between the national organization and the State, district and county societies. For the first time a practical scheme of complete organization of the medical profession of the United States was provided. This is the fourth annual session held under the new plan of organization.

Previous to the reorganization, the valuable scientific work of the sections constituted almost the sum total of the effective work accomplished by the Association. Matters appertaining to medical education, to the public health, to national legislation, and to the welfare of the profession received no deliberate consideration; and in consequence no decisive action was carried out. This condition existed for the reasons already mentioned. In a word, the very objects and aims for which the Association was organized were thwarted by the growth of the Association into an unwieldy delegate body. Under the reorganization, the House of Delegates, in which the membership of the State societies is proportionately represented, now gives deliberate consideration to those important matters, already

indicated, which under the former organization were neglected.

The influence of the revised plan of organization was immediately apparent in the increased attendance at the annual sessions, and the stimulus felt in every purpose of the Association. And each year this influence has grown, until some idea can now be formed of the great possibilities to come from organization on a definite and practical plan. The good results to accrue to the profession as a whole, and to every member as an individual, are so positive that no subject can deserve more careful consideration by this body than that of medical organization. Indeed, it is the fundamental question before us, and on its decision depend the results of all our other efforts in all directions.

In order that we may thoroughly appreciate the origin and purposes of the Association, and thereby be better prepared to meet its present and future requirements, I have very imperfectly outlined the history of its earlier years. During the more than half century of its existence it has always brought to its councils the ablest and best men in the profession of America. Among its leaders from the beginning are found the most eminent physicians and surgeons of the day. In the list of its active members are the names of Samuel D. Gross, Paul F. Eve, Austin Flint, Marion Sims, N. S. Davis, Alfred Stillé, Lewis A. Sayre, and many others which adorn the annals of American medicine. It has from the beginning been a great power with the profession of America. Its greatest influence, as I have already indicated, was in the growth and diffusion of scientific knowledge through the splendid work of the sections. In elevating medical education, in promoting legislation, and advancing the powers of public health organizations its influence was most felt in the development of a helpful public professional opinion. The extension of the influence and advantages of organization to the masses of the profession was gradually lost sight of in the annual meetings, and the work relating to matters of public policy was spasmodically considered and imperfectly executed. Whatever was accomplished along these lines worthy of mention was the work of committees. The necessity of reorganization was appreciated by the leading members of the Association long before it was accomplished. In 1888, Dr. N. S. Davis, as chairman of a committee appointed for the purpose, reported a scheme of reorganization very similar to that adopted in 1901 at St. Paul.

"Organization.—The object of this Association shall be to federate into one compact organization the medical profession of the United States, for the purpose of fostering the growth and diffusion of medical knowledge, of promoting friendly intercourse among American physicians, of safeguarding the material interests of the medical profession, of elevating the standard of medical education, of securing the enactment

and enforcement of medical laws, of enlightening and directing public opinion in regard to the broad problems of State medicine, and of representing to the world the practical accomplishments of scientific medicine." (Article II, Constitution of the American Medical Association.)

If every physician worked alone, relied on his own unaided observation for his knowledge, never looking outside his own scope of view, ignorance would prevail and there would be no progress in medical science. Medicine is not an exact science, and until perfected by extorting from Nature all her secrets, it must from the nature of things continue to be a progressive science. Never before in the history of medicine has such marked progress in all its departments been made as during the present age. Theories have been supplanted by facts; laboratory research and clinical investigation have taken the place of tradition and authoritative opinion. To rely on the accomplishments of the college period is to be left behind in hopeless incompetency. The advance of medical knowledge is to be observed first in our medical societies, and afterward in our scientific medical journals. In the medical societies innovations are subjected to criticism and discussion by those competent to judge the merits of scientific contributions. Moreover, there is a stimulus to study and investigation from association with workers in the same field; and one obtains a broader view of every subject so considered. The physician, more than any other professional man, is isolated by the conditions of his life, and to no profession is the educating influence of society work so essential and invaluable. This same condition of isolation is at the foundation, for the most part, of the jealousies and petty bickerings so prevalent in our profession. These troubles are, as a rule, the result of misunderstandings, and are both prevented and corrected by coming together in a society composed of physicians. The lonely worker in any calling is prone to become narrow, suspicious and morbid. Our medical societies are the great postgraduate schools of the profession, where knowledge is increased and individual character developed.

But the promotion of scientific investigation, and the diffusion of medical knowledge are not the only objects of organization. Our profession has a most essential and important duty in relation to the public health. Through no other agency can municipal, State and national health authorities formulate and secure recognition of laws to prevent and control disease. Another duty no less essential is to regulate and to control medical education that the ignorant and unworthy shall not be admitted to the privileges of the profession, thereby preserving the time-honored standard of professional honor and scientific capability. In this age of organization, without it the profession is powerless to secure the enactment of humane sanitary laws, by which alone the people can be protected from

preventable diseases. The welfare of the profession, collectively and individually, can only be subserved by organization. Without such organization, our profession, as a body politic, will be without unanimity of sentiment or action in relation to the important scientific, ethical and social questions which confront us; and consequently without influence, politically, socially or otherwise.

In the declaration of the constitution adopted at St. Paul, which I have just quoted, the American Medical Association has undertaken to place within reach of every reputable medical practitioner in the United States these incalculable advantages of medical organization.

The Committee on Reorganization appointed in 1900 has treated this subject in a masterly manner. After a careful study of the condition of the profession throughout the States with relation to organization, reports have been made to the Association showing the needs of the profession and the extent of the work required. A uniform plan of organization for State and county societies, making the county society the unit of organization, and federating all State societies in the national association in harmonious cooperation, has been prepared by the committee. The able chairman of this committee has, with remarkable tact, patience, and good judgment, given his personal supervision to this great work in almost every State and Territory. In his latest report it is announced that all the States and Territories, except three, and including Hawaii and Porto Rico, are now organized on a practically uniform plan, with universal local societies, and coincident membership in them and the State associations are the cardinal feature. To illustrate the magnitude of this work, I mention that, under the stimulus of reorganization after the plan of the committee, the Michigan State Medical Association increased in membership in one year from 452 to about 2,100. Texas increased the membership in the same time from 382 to 2,510, while several States quadrupled their membership. While these results are phenomenal, and elicit our admiration, it will be realized how much remains to be done when it is considered that few of the States have over 50 per cent. of the eligible members of the profession enrolled as members of the society. Indeed, the work is yet almost in its infancy. What has been accomplished is an assurance for the future; and considering the brief time since reorganization began, is a high tribute to the enterprise of the national association and the work of its able and efficient committee. The possibilities of this work are stupendous, and as it proceeds the Association can confidently undertake the great reforms of such incalculable moment to the profession and the public. In his official report to the House of Delegates one year ago, the chairman of the Committee on Organization, after reporting his labors during the year, said:

"The real test of our organization will come in each State when the first outburst of enthusiasm has passed, and county societies, the foundation for everything, are likely to disappear as rapidly as they have been formed, unless their usefulness to the rank and file of the profession can be demonstrated in a very broad way."

In recognition of this fact, it is of the utmost importance that the personal attention so effectively given to this work throughout the States by the chairman of the committee be continued.

Medical Education.—When the American Medical Association was founded in May, 1846, the delegates assembled in response to the following preamble and resolutions of the Medical Society of the State of New York:

"WHEREAS, It is believed that a national convention would be conducive to the elevation of the standard of medical education in the United States, and

"WHEREAS, There is no mode of accomplishing so desirable an object without concert of action on the part of the medical societies, colleges and institutions of all the States, therefore be it

"Resolved, That the Medical Society of the State of New York earnestly recommends a national convention of delegates from medical societies and colleges of the whole Union, to convene, in the City of New York, on the first Tuesday in May, in the year 1846, for the purpose of adopting some concerted action on the subject, set forth in the foregoing preamble."

From this it is apparent that this Association was founded with the avowed and specific purpose of elevating the standard of medical education in this country. This subject has constantly received consideration from the Association throughout the years of its existence; and while no distinct and positive reform marks its action, the perpetual demand for improvement undoubtedly molded the public sentiment of the profession which ultimately stimulated action on the part of the medical colleges. Since the addresses of my two distinguished predecessors, who immediately preceded me in this chair, were devoted to the consideration of medical education, I shall only make brief allusion to this subject. The several national organizations and the many State boards which are now dealing with this important professional problem invest the changing conditions with peculiar interest. The present is a transition period in the advancement and reform of medical education in America.

The consideration of this subject in the House of Delegates culminated in the establishment last year of the Council on Medical Education of the American Medical Association. During the past year the council has taken up its work with exceptional energy and good judgment, and is directing its efforts along most practical lines. The first annual conference was held

in Chicago April 20 last. Representatives of many State examining and licensing boards, of the American and Southern Medical College associations, and of the government medical services, attended and participated in the discussions of the papers presented. The plan and scope of the work of the council can be best appreciated by a consideration of this extract from the address of the distinguished chairman of the council delivered to the conference:

"What we need is cooperation, especially the cooperation between the medical profession, represented by the American Medical Association, and the State and county medical societies, and the State authorities, represented by the State licensing and examining boards. The most important question, therefore, before this conference is, How can the American medical profession and the State licensing bodies cooperate to elevate and control medical education? It is believed that such cooperation is possible. In such cooperation it will be the function of the American Medical Association to represent and possibly mold the opinion of the medical profession, and employ its influence and the influence of the county and State medical societies in obtaining proper medical legislation. In such cooperation it will be the function of the State licensing bodies to protect the interests of the public and the profession by seeing that the medical laws are properly interpreted and enforced, and from their intimate knowledge with the medical acts they can often be of service in securing or modifying medical legislation.

"It is not the purpose of the Council on Medical Education of the American Medical Association to attempt to arrogate to itself any special powers, nor does it desire either to criticize or interfere in any way with any of the agencies which are already in the field. If its creation is to result in good, it must be the means of obtaining cooperation between the medical profession and the medical schools, the colleges of arts, the State examining boards, the government services, and all the factors which are interested in elevating and controlling medical education."

By securing cooperation of the various State and national bodies engaged in this important work, recognizing the varied interests involved in the numerous States of the Union, and fostering an intelligent public sentiment, so essential for every great reform, the influence of the Association will be of the most effective character.

Medical Legislation.—Chapter VII, Section 3, of the by-laws provides a permanent Committee on Medical Legislation "to represent before Congress and elsewhere the wishes of this Association regarding any proposed legislation that in any respect bears on the promotion and preservation of the public health, or on the material or moral welfare of the medical profession." This committee was appointed in 1903, and under the leadership of its accomplished and

energetic chairman proceeded at once to organize the auxiliary committee provided in the by-laws. This being a permanent committee, its work will be continued from year to year. With the auxiliary committee, representing every State in the Union, and the several medical departments of the Government service, every representative of the people in Congress can be reached directly. The importance of this work is so apparent that I need only call attention to it at this time, and urge on all members of the Association the necessity of aiding and cooperating with the committee at all times. The disregard of the good work of the medical profession in the public service (to say nothing of the indignities offered) on the part of Congress is notorious; and it is only by such concentrated power of the profession, intelligently directed, that such injustice may be overcome. I commend to your consideration the report of this committee in order that you may appreciate the important work already projected.

Council on Pharmacy and Chemistry.—The use of proprietary medicines in the treatment of diseases has become one of the most confusing and demoralizing questions of the day. All proprietary medicines must not be classed as secret nostrums, for there are many honestly made and ethically advertised proprietary preparations that have therapeutic value and that deserve the approval of the medical profession. But there are many preparations offered the profession, which are protected by copyright or trade-mark, with formulæ more or less fictitious, and for which are made extravagant claims, which are in fact secret remedies. These preparations are so exploited by the manufacturer that the physician is persuaded to use them instead of writing a prescription; and since they usually bear popular names and plausible therapeutic claims, they appeal to the fancy of the laity. The field is an enticing one for commercial enterprise since these preparations in many instances are simple mixtures and contain the most inexpensive drugs. The use of such remedies is both unscientific and unjust, alike to physician and to patient.

The separation of the legitimate pharmaceutical preparations from the class of fraudulent nostrums described is a most difficult undertaking. This perplexing problem forced itself from year to year on the attention of the Board of Trustees in the effort of the board to keep the advertising pages of *The Journal* free from unethical advertisements. In order to have thorough protection and to make no unjust discrimination, the board has established the Council on Pharmacy and Chemistry to make the necessary investigations. The council is composed of pharmacists and chemists of national and international reputation. It will be the aim of the council to publish in book form, a list of the preparations which are not official, yet which conform to the proper ethical standard. The

work of the council will be similar to that of the Committee on Revision of the United States Pharmacopœia.

The magnitude and importance of this work is such that I desire to direct attention to it here, and to commend it to the members of the Association as deserving every possible aid and advancement. It is the only practical way to deliver the profession from one of the greatest curses that ever came on it.

It has been my endeavor on this occasion to outline the plans of the founders of the Association, briefly to trace the evolution of those plans throughout half a century of progress, and to recount some of the purposes that invite our active exertions at the present time. From a small body of delegates our Association has increased until it is now the largest medical organization in the world. It owns valuable property, has accumulated a considerable fund, and has a large annual income, all of which belongs to, and is subject to the control of, the members who through their delegates select the Board of Trustees to manage their funds.

The possibilities of the work before us are almost beyond calculation. In acting as the representative and agent of the 120,000 physicians of the United States, the Association is assuming great responsibilities, which will increase from year to year. It will require administrative and executive ability of the highest order to meet these demands; but there is both prophecy and proof in the work already accomplished that men will appear as needed to discharge the supreme duties of a great profession in behalf of science and humanity.

THE DELAY OF OLD AGE AND THE ALLEVIATION OF SENILITY.¹

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In 1805, Lewis and Clark, typical and celebrated among American explorers, turned their faces toward the furthest west and disclosed in a single expedition the possibilities of the continent and the mysteries of the great undiscovered. Their feat was in principle but a repetition of the undertakings of Columbus, De Soto and La Salle, of Daniel Boone and the numberless pioneers who so quickly, almost suddenly, transformed America from a desolate wilderness into the puissant commonwealth of to-day. In each we may discern a discontent with the established order and environment of his heritage; an inspiration to find in newness a satisfaction which the settled regions, settled habits of thought, settled manners of life failed to provide him at home. The word "settled" is significant. Our race is without rest until it settles things; and with this there stalks a poignant impatience with the things that are settled. The new, the

undiscovered, the unattained, the unprecedented, this it is which charms American manhood. The Muezzin calling his prayers from a minaret in far away Cairo, the yellow haze in the circumambient air, the camels with jingling bells, the palms turned always eastward by the hot breeze from the monotonous sands,—these possess for the western man no attraction greater than that of poetic interest. In these scenes he could never make his life. The European finds in America everywhere that which impresses him with our youth; in the Orient, he sees the indisputable evidence of age and a settled order of things. This exploitation of new lands, the cry of "Westward Ho!" which for the past few centuries has stirred mankind, is rapidly, inevitably dying out; but during the long period of its continuance it has wrought important changes in our point of view, it has stimulated a luxuriant growth of thought, it has modified considerably our nature. As our common interest has been fixed upon the untried, we have gradually come to exaggerate the importance of new truths and to ignore the meritorious which the slow moving caravan of thought has brought us from the ages.

Now, it may seem a *non sequitur*, but reflection leads one to inquire if the great appreciation which we feel for the vigorous youth-spirit of recent times, has not educated us to prize, perhaps to overvalue, youth, to the disparagement, if not to the absolute neglect, of old age.

In saying this we are not unmindful of the element of truth in the right interpreted utterance on this subject of one of our most distinguished colleagues. From the standpoint of the original investigator, as from that of the soldier, or the adventurer, there is nothing to replace the effort of the man under forty; but if for no other reason than to obstruct impetuosity and to provide such a handicap that youth shall not too soon outrun the limitations which a wise Providence has provided, middle and late old age have their uses. At any rate the old man is with us and there appears to be no acceptable method of obliterating him, even if it would add to the welfare of the race to do so.

Finding ourselves in this obvious position, it would seem the wise course so to manage that the disheartening effects of years may be as long as possible postponed; and to seek those methods by whose application we may do our utmost to minimize the terrors of senility. If youth is so delectable, let us find how it may be protracted; if old age is so beset with ineptitude, let us not rest until we learn how it may be mitigated. Such a proposal is not quite identical with a scheme for the prolongation of life—mere increase in years, although it would doubtless include this, however, desirable, or regrettable it might be. It has to do directly with something about whose desirability there can be no doubt. In other words, I ask your attention to the question of the practicability of *keeping* the various

¹ Oration on Medicine at the Fifty-sixth Annual Session of the American Medical Association, at Portland, Oregon, July 11 to 14, 1905.

² Courtesy of the Journal of the American Medical Association.

functions of the organism, of preserving the physical and intellectual powers, of delaying the onset of degeneration as much as may be, of developing a race less prone to early decay.

Then, besides this, I wish you to consider the feasibility of so managing the senile when once their degeneration has arrived, that many of their miseries may be avoided and the remainder lessened in degree. Having granted that age is inevitable the average man would seem to have become indifferent to his penalty for living, and, if complainingly, he none the less heedlessly allows his forces to ebb away prematurely. With some the whole of existence seems to be spent in infancy, adolescence and senility. There is no period in which one can say, "there is full, healthy maturity." When examined this early senility is found to result from pathologic processes and there the observation ends as though it were conclusive. But the event is not thus to be disposed of, for, according to our best standards, senile changes are always pathologic, and, therefore, the question of prematurity rests on some pathologic reason for cause, or else upon inherent weakness in human vitality. We are in the habit of speaking and thinking of senility as something separate and apart from disease; as a result, not sufficient attention has been given to the question of prevention of age.

On this subject one cannot escape the bold work and bolder thought of Metchnikoff, and I quote at once his description of the degenerations of age: "In senile atrophy the same condition is always present: the atrophy of the higher and specific cells of the tissue and their replacement by hypertrophied connective tissue." It is this same process on which every teacher of medicine constantly harps in discussing disease, the disappearance of the parenchyma and the increase of the stroma.

One need not dwell on the theory of Metchnikoff as to the rôle of the phagocytes in the process; for the moment it is enough to know and recognize that senile atrophy is pathologic and that, essentially, old age is disease. It is unnecessary to discuss the plausible but startling suggestion—that of finding some antiserum which might antagonize the development of the age-producing agencies. Already we possess some knowledge of how to defer age, but this information is not generally insisted on as a guide in living. We frequently allude to measures of prevention, but we do not reduce them to a system which can be taught to the student and to society. If we are further to lengthen the probational study period in medicine, it will be wise to give the matter of deferred old age very careful consideration. If the subject were studied seriously, we would foresee a tremendous improvement in the type of humanity, and the readjustment of many habits, customs, social questions along altogether new lines.

Obviously, real progress cannot be made with-

out accumulating data from which to deduce positive conclusions. At present we lack information on such simple matter as the effect on the organism of diet, exercise, recreation and rest. There are many opinions, but they are largely theoretical. To begin with, we must know something about the material with which we have to deal; that is, the inheritance, the reserve powers, the internal resistance of the individual. In fact, we know very little concerning the inheritance of any one. All are more or less obscure in the matter of family history. There are courts of records in which are found descriptions of estates, but there are no archives in which are deposited accurate descriptions of the various members of the family itself. We are more particular in relation to our domestic animals, especially in the introduction of a new strain. Inquiries are made as to the matter of endurance, longevity, powers of nutrition, good or bad qualities of mind or body, but concerning ourselves, there is an indifference to these important qualities of organic perfection. It would not seem to be altogether impossible to acquire some official record of the physical and intellectual qualities, in other words, strains in men. It is not improbable that if such records were known to exist, they would be not only consulted, but would gradually grow to have an influence on the formation of families. Love is said to know no barriers, but history fails to confirm this view. If a matter of class, of caste, or rank, has been sufficiently important to control the forming of marriage contracts, it is not impossible to conceive of a more intelligent public sentiment which would make an alliance with a family celebrated for physical, intellectual and moral superiority, a thing greatly to be desired; and conversely, which would lead to the abhorrence of an alliance with a family in which freaks, degenerates and incompetents, or in which a tendency toward lowered nutrition, too early maturity, or premature senility were frequent events.

Naturally this is not an affair of a generation, but it is unquestionably a doctrine which ought to be taught. The notion that acquired characteristics can have any transmitted influence on the character of the offspring, as formerly taught by the Lamarckians, is still doing great harm. Our young people should be instructed in the fact that the well being of their posterity depends almost altogether on the native stamina of the germ-plasm with which they are endowed. They should be taught to understand the responsibility implied in maternity and paternity, and should be made to recognize that the greatest influence which they can have on the well-being of their children is in the selection of the spouse. The sentiment should be encouraged that parentage is a matter which concerns the public, and especially posterity, more than it does the parent; that the germ-plasm of the race is of all questions the most important which con-

cerns it. Measures could be adopted which would make it more possible than at present for individuals to inform themselves concerning the family characteristics of the contemplated fiancée. A bureau for the precise registration of disease and causes of death, together with the chief facts in family and personal history, might be established through legal enactments, reinforced and made active by a high social sentiment. Such a bureau would afford the needed information, and the special study of the material thus provided would result in the formation of guiding principles in human biology and race development.

Such a system might seem to be contrary to our laws of personal rights, and, of course, the sanctity of reserve may not be easily disrupted. Nevertheless, with Emerson, "We shall one day see that the most private is the most public energy; that quality atones for quantity," and although we cannot attain at a bound to these heights of wisdom, we may, at least, begin to map out a way. He is short-sighted who supposes that the complacency shown in the devolution of the race must continue, unchanged, eternally. We have only admiring applause for the remarkable accomplishment of Burbank in the vegetable world, and yet such are our deep-rooted prejudices that we shrink from the application of similar principles to human uplifting even when we know it is possible. Shaler remarks that man "sorely needs a herdsman's care." The subject is painful, yet I think it will be acknowledged that susceptibility toward tuberculosis, insanity, alcoholism, epilepsy, *et cetera*, is hereditary. Granting this, it follows that a stock could be developed which practically would be immune to those diseases. Doubtless all will regard the realization of this suggestion to be remote and some may liken it to that of Maeterlinck, who says: "Man may sometime master the secret of gravitation and by means of it steer his planet wherever in the universe he wills." The principle is open to such wide application that it may easily be obscured in absurdity. Nevertheless, here is an honest straightforward truth not so far beyond our reach. It lies in a public demand that none but healthy parents shall be allowed to bear children. The brevity of middle age resides, first, in the inherited quality of the organized tissue; second, in the effects of its environmental conditions on each organism. We physicians are making it our function to exterminate disease. Why should we be content with merely pointing out that certain disease tendencies are hereditary without taking some practical steps to prevent such disease. Why should we be content with merely pointing out that certain disease tendencies are hereditary without taking some practical steps to prevent such disease transmission? As an illustration, it doubtless would be a hardship to the syphilitic to make procreation for him a penal offense. Nevertheless, such a course would be

full of beneficence to the race. The amount of nervous and other disease in the innocent resulting from syphilis in progenitors is incalculable. The incompetence and misery which often overtake the unfortunate victim in middle life as the result of syphilis, one or two generations removed, must be considered. Those who have studied the subject carefully, regard this disease as responsible for one-fifth of all cases of arteriosclerosis, and of yet a higher proportion in those cases occurring in middle life. A man has not the moral right to beget disease. Notwithstanding that it usually comes through ignorance, it should not be allowed. The profession of medicine should make its convictions bear fruit, and should teach and should be expected to teach that the marriage of a large number of people whose nuptials they now help to celebrate should either be prohibited or else made barren. To those who would regard the realization of these thoughts as unattainable, it may be remarked that the world is yet very young, and as a result, as Carlisle has said, in most things very stupid. At any rate it will be admitted that middle age could be considerably prolonged and the infirmities of old age largely mitigated if we could eliminate from the equation that faulty cell metabolism which arrives through inheritance.

The trend of modern thought is toward the development of the individual. Our researches in therapeutics, dietetics, immunity, gymnastics all alike are directed toward the betterment of the individual by making life possible to many who would otherwise perish, comfortable to many who would otherwise survive in misery—results in prolonging life. Our educational efforts concern themselves more and more with fitting for life the otherwise unfit, in so dealing with the neurotic, the semi-imbecile, the vicious and criminal that they may be practical units in the body politic. The result is that individuals otherwise impossible are so modified that they are finding some happiness in life and become less disturbing elements in society as a whole. There can be no doubt as to the benefit to the individual, and no doubt as to the good which comes from the reflex effect on society. Perhaps nothing counts more for the moral uplifting of the masses than the awakening of personal interest in all altruistic undertakings, but let me repeat, we must dismiss as untenable the views of the Neo-Lamarckians that acquired characteristics of the individual have any appreciable effect on the offspring. It is acknowledged that the natural tendency of defectives of all kinds is toward extermination. Left to themselves, many of these weak strains would disappear. In making it possible for these strains to continue to blend and to dilute the organic type of the race, we are unquestionably lowering the future standard of internal resistance and we are creating a threat to physical, intellectual and moral perfection.

On this subject Professor Woods Hutchinson of this city has said some interesting things.

Is it unchristian or unethical to consider this question from the phylogenetic standpoint, or, on the contrary, is it not from the highest ethical plane that we look forward to a means that may elevate man spiritually, strengthen him intellectually, increase his vital and physical vigor, thus widening the period of his usefulness and decreasing his sufferings as a whole? We find ourselves sustained in our efforts when they are directed toward helping the individual, but there seems to be a social veto placed on the study of generic betterment. Weismann and his followers have shown us that the character of the individual depends on the germ-plasm with which he starts life, and although education and favorable environments may modify greatly the individual, they have no effect whatever in improving the character of his posterity. The possibilities of an individual, his resistance to disease, his longevity, his strength and his intelligence are determined beforehand by his inheritance. It is known that it is possible to bring deterioration by introducing an inferior strain. No educational advancement can counteract the injurious effects of this preservation and inbreeding of the bad stock. Unless intelligent foresight be used to prevent this definite and ascertained source of degeneracy, we are likely to find a growing depreciation of our racial stock and, in spite of our modern preventive medicine, a progressive increase of mental and physical disease, and an abbreviation of the working years. By homely methods we have learned that aside from the question of perfect nutrition and proper exercise of function, there is nothing which contributes so unquestionably toward the improvement of organic life as intelligent study of what is known as breeding, in other words by the intelligent blending of the germ-plasm of healthy, resisting, long-lived stock so that there may result not inferior progeny, but offspring superior to the parental stock. I am aware that the question is not new, and that its mere mention exposes one to criticism, not only from the timid and ignorant, but even from the wise and philanthropic, and yet, no one can deny that in shutting our eyes to this truth which Nature spreads plainly before us and which she makes the subject of countless lessons illustrated by individual inferiority, perversity, disease and death, we are not doing all that we ought for the coming race, not all that we might toward assisting that evolution which we hope for, but which lingers so in the process. It will be said that no one can contemplate such a scheme as is here suggested without feeling strongly convinced of its impracticability. Of course, it must be admitted that the large fulfillment of such ideals is at present quite impracticable, but it is not impracticable to study the subject with the hope of finding certain aspects which may admit of modification.

By a study of the subject we would at least offer a reasonable antidote to the possible injurious effects of the modern rage for individualism. More than this, it may be possible, by more or less united action, so to modify established customs, social tendencies and common law that we may elevate the sense of family, and possibly municipal and national morality to a standard high enough to result in our placing the welfare of the community above the desires and the instinct of the individual. As we have somewhat meddlesomely diverted the natural tendency of deterioration and degeneration from its end, thus interfering with the action of the law of the survival of the fittest, it does not seem improper that individualism should recompense society by yielding some of its prerogatives for the welfare of the race; or, to put it more pointedly, it would seem only fair, since we have preserved the life of the weakling, that we should deny him the privilege of paternity, or since we have educated the defective or criminal youth into semi-useful citizenship that we should forbid him the right of increasing the number of his kind. In one of our States a legislative enactment looking toward this end was recently vetoed by the governor who accompanied his decision by a conventional lecture to the profession of medicine on its willingness to disregard the rights of individuals. This illustrates one of the difficulties in the way, and would seem to indicate still another field in which physicians must assume their rôle of public educators. The sentiment of the people is instinctively against public interference with personal privilege. This feeling seems to be particularly strong in the Anglo-Saxon people, and to be contrary to the nature of our institutions; yet, like every other privilege it is susceptible of doing great evil if carried to its full logical extreme.

Are we not as an organic type suffering from an extreme application of individual rights? Are we not inflicting an injury on the race through permitting unwholesome privileges to the individual? Is it necessarily dangerous to attempt to create a public sentiment, a social feeling toward the making of new customs and the enactment of new laws which may result in the elimination of at least some of the more abhorrent and destructive elements that at present are blending with and antagonizing the evolution of the race? Would it not be desirable to have an aristocracy of health? That is to say, to see developed a zeal for physical and intellectual perfection, and to have that zeal supported by public sentiment, so that there might be created something like a caste, the attributes of which should be mental and physical wholesomeness, and from which should be excluded those families which are shown by carefully studied data to come of degenerate or unfit stock? This would result in a contest between the general and the particular. At present the particular, the individual, prevails; in the presence of rightly adapted social feeling

the general would prevail. Evolution would thereby be speeded and not retarded as at present. The principle involved does not seem to be any more unethical than the application of the quarantine laws which now operate injuriously to the individual, but make greatly for the public good.

Let us now consider what may be accomplished in the way of postponing age by the reasonable treatment of even the poor material that comes to us. Undoubtedly the question is as broad as the whole subject of personal hygiene and general therapeutics, and so, for the most part, must be passed; there are, however, some aspects of the subject which deserve special consideration. One of these is the improvement in the nutrition of the aged as the result of good teeth. While all recognize the comfort and convenience which we owe to the dentists, it is doubtful if we fully appreciate how much they have contributed to good health and longevity. For another great advance we have to thank the oculists. Who can estimate the additional resources both of usefulness and happiness secured through the discovery of spectacles and the operation for cataract? Useful eyesight contributes much toward health and long life for the reason that it permits of a continued interest in living which otherwise would be lost. It permits of a struggle for an ideal and in this real happiness consists. The ideal, of course, is never reached, but, as Montaigne says, the reward is not found in the victory, but in the conflict. Perhaps no one factor is so important in maintaining courage and health in old people as the creation and continuance of some keen interest in life, and this interest, even in the otherwise enfeebled, may be kept up by means of useful eyes. Now comes the time worn but neglected subject of arterial disease.

Too often our attention is for the first time attracted to arteriosclerosis by the appearance of fibroid or fatty degeneration, exhibiting itself in the figure, form and viscera of the individual. Even after these later changes appear measures may be adopted to stay the march of the process, but how much better it would be to anticipate it. For instance, by noting the high and rising blood pressure and the physical signs of cardiac strain, by estimating the decline in urinary solids and the rise in the urotoxic unit, by measuring the decline in respiratory capacity, or by detecting the falling off in cutaneous secretion and the loss of the pliability and softness of the skin, we may make ourselves aware that vascular degeneration is progressing. Heedless of these earlier manifestations we shall soon awake to the advent of the state which Sir James Paget has so marvelously described.

In the earlier steps of arteriosclerosis, if intelligent study be given to the individual, to his habits of life, to his excesses and to his deficiencies, very much can be done, and, by thoughtful men, is done, to delay arterial changes and to restore functional activity.

May I trespass so far as to emphasize the importance of judging and correcting the disturbed balance between assimilation and waste—the anabolic and katabolic processes? The facts are so well understood that one hesitates to mention them, and yet just here there is so much neglect of precious opportunity. There are successful methods of lessening the extent of auto-intoxication and of widening the field for the play of nutritional processes. This is so commonplace that we neglect it. Middle age often brings luxury and at the same period the contracting arteries narrow the field of physiologic activities. The circumstances of life and the taste of the man for indulgence in appetite or for excess in undertakings, while the limitations of the organism are increased. The tendencies are thus in opposite directions, and, with Munsterberg we ask, "How can they keep together who are going different ways?" Ultimately, they must separate, of course, but temporarily they may keep company if we help to preserve harmony between them. There is abundant proof that even advanced arteriosclerosis may be so far modified as to delay the oncoming degeneration and to admit of happy usefulness, but the victim must be content with moderation and not hope like Mahomet to cleave the moon in twain.

Advanced arteriosclerosis is too generally neglected, and intoxications of one kind or another are for the most part responsible for it. Our prophylactic and curative measures are readily understood. It is well known that the relatively great fatality of pneumonia and other acute diseases is explained by the greater toxemia which exists late in life. Besides this, the auto-intoxication increases the blood pressure and induces prematurely fatal events of cerebral, cardiac and renal diseases. Almost as deplorable as these are the conditions of unnatural excitement, confusion and depression from which many people unnecessarily suffer in old age. Still further, there may be found in vascular disease the source of much severe pain from which old people suffer. This pain is often referable to the aorta, at times to those forms of aortitis and peri-aortitis of the abdomen recently so well set forth by Teissier of Lyons. The latter has also shown that the pain can be ameliorated, the progress of the disease stayed and even great improvement induced by rational treatment. Aortitis and peri-aortitis often greatly interfere with the flow of blood into the branches of the abdominal aorta, and as a result the organs supplied by these branches suffer special degeneration. In middle age and later life, intractable diseases of the stomach, kidneys and other organs could be dealt with much more successfully, and comfortable longevity secured, if more attention were devoted to this pathology.

There remains for brief consideration the question of what can be done to make old age more tolerable; in other words, to remove it to a physiologic basis. We find on close consider-

ation that most of the derangements from which the aged suffer can be classified as belonging distinctly to pathology, but I am afraid there exists a tendency among us to dismiss these matters as necessary corollaries of senility, without giving them that careful consideration which similar processes receive in younger patients. To a few the diseases of old age have a peculiar charm, and these few who give senile diseases special study seem to agree that the complaints of the aged arise for the most part from toxic causes. Even the threadbare question of arteriosclerosis falls to a large extent under this head. There is good reason for believing that this toxic state which underlies the decadence of senility takes its origin for the most part in the colon. Metchnikoff supports the view that mammals have developed a large colon for the purpose of storing the products of digestion, and that man has inherited a large colon at the expense of his longevity. This organ harbors an immense number of bacteria, leading to fermentations, putrefactions and the production of alkaloids, fatty acids and toxins which man has to combat for the length of his mortal days. While vitality is young and vigorous, the combat is not so unequal, but with failing powers auto-intoxication prevails in the contest between the internal resisting powers of the organism and the toxic adversary made potent by inheritance. Unfortunately the degeneration of age first produces functional insufficiency of the organs of elimination, then their degeneration, and as a result we find the skin, kidneys, lungs, liver incompetent in each individual overtaken by years. It is somewhat remarkable that facts so well understood as these do not receive more attention.

There are few text-books, there is little teaching devoted to the pathology and right management of senile disease, and yet experience teaches that few patients respond more satisfactorily than do the aged if their cases are approached with the principles in mind which are here set forth. It is not merely a question of dilatation of the colon, nor of any special defect of the organ; even in the absence of these, the source of auto-intoxication exists and becomes important because of the failure of the skin and other emunctories which, earlier in life, are relatively sufficient. The indications are obvious. In addition to the usual measures for improving the general circulation, old people are benefited by systematic colonic lavage, stimulating baths with superficial massage, prescribed pulmonary gymnastics and an abundant drinking of pure water. It is the almost universal effect of these matters which has made it seem to me a subject of sufficient importance to call to your attention in a general address. There is something inspiring about youth which gives an incentive to our care of the diseases of childhood and adolescence, but there is something benignant in studying the problems that lead to the postponement of age and to the alleviation of the trials of senility. Old

age is repulsive when it is pathologic, but it is beautiful when it is physiologic, and it would appear as a fitting theme for the consideration of this great body at its meeting in this new land of the setting sun.

**THE INFLUENCE WHICH THE ACQUISITION OF
TROPICAL TERRITORY BY THE UNITED
STATES HAS HAD, AND IS LIKELY TO
HAVE ON AMERICAN MEDICINE.¹**

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It is a custom in many universities, both in this country and in Europe to allow each professor leave of absence during every seventh year of service. This custom is doubtless based on the Sabbatical year of the Pentateuchal codes, an institution which demanded that the fields be allowed to lie fallow every seventh year. It is a question whether the Sabbatical year, as an institution, could not with benefit be introduced into matters medical, and whether we might not profit by resting every seventh year, and devoting our time, not to the strenuous throes of medical existence, but to a calm, dispassionate review of the progress of medicine in the preceding septennate, and the factors which have influenced that progress. With this idea in view I have chosen to speak to-day on an aspect of our medical progress which is now in its Sabbatical year.

It is at present almost exactly seven years since, by the terms of treaty following the Spanish War, the United States came into possession of tropical territory in both the eastern and the western hemispheres. It is unnecessary and inappropriate to discuss here the general significance of this territorial acquisition, its bearing on politics, its effect on commerce, its influence on public affairs in general; it is sufficient if we, as the representatives of the medical profession of this country, take stock of the medical questions involved, discuss their significance, and gauge the effect which they exert on American medicine in general. No doubt many of our hyperopic brethren foresaw, seven years ago, some of the effects which our acquisition of Porto Rico and the Philippines was to have on American medicine. There is just as little doubt that some of the results were entirely unlooked for, and have been complete surprises. It might appear at first sight that, from analogy, we should have been able to foretell the influence which increased commerce with our tropical territory, and the return of our soldiers and sailors with tropical diseases, would have on medicine in the United States. Obviously one would look to the experience of European countries, and notably of England, to form a basis for judgment, for these countries have had tropical possessions for generations. It must not be forgotten that

¹ Oration on State Medicine at the Fifty-sixth Annual Session of the American Medical Association, Portland, Oregon, July 11 to 14, 1905.

² Courtesy of the Journal of the American Medical Association.

the physical conditions here are different from those in Europe, for while Europe is almost entirely within the temperate zone, portions of this country are semi-tropic, and a few very small areas are actually within the tropical belt. The United States, therefore, presents a much more favorable soil for the transplantation of tropical diseases than does Europe. Realizing this, numerous American writers on tropical diseases have sounded, in the last seven years, notes of warning and alarm. Their apprehensions are based more on theoretical grounds than on observed facts, but for all that are worthy of our most serious consideration. The object of this inquiry is to determine, if possible, how great this danger is. What are the prevailing diseases of our tropical possessions? Which of them, if any, has appeared among us; which, if any, has gained a foothold on our soil; and which may possibly become widely distributed? Aside from endeavoring to answer these questions, we may with profit glance at the effect which the study of tropical diseases has had on the comprehension of cognate diseases in the United States, and also observe that it has led to the recognition in this country of unsuspected diseases of wide distribution, and great economic importance.

Uncinariasis.—Perhaps one of the most startling results of the increased interest in tropical diseases has been the discovery that large sections of the southern portion of this country are infected with the hookworm, and that large numbers of the inhabitants are suffering from uncinariasis (anchylostomiasis) or hookworm disease. The starting point of this remarkable discovery was, almost certainly, the work of Ashford in Porto Rico in 1900. This observer noted the great frequency of the disease in that island, and pointed out that, to a large extent, the disability and wretched condition of many of the natives was due to it. The credit for drawing attention to the probability that the disease was widespread in our Southern States is due to Charles Wardell Stiles, the Zoologist of the Bureau of Animal Industry, and to him also is due the credit of amply proving what he at first brought forward merely as a probability. It would be out of place here to go into detail as to the clinical history of this disease, or the minute structure of the parasite which causes it. Mention must be made, however, of Stiles' discovery that the American uncinaria differs from that of Europe. It will be of interest to consider the geographical distribution of uncinariasis in this country, the main facts connected with the method of its spread, and the evidence as to the likelihood that it will become more widely prevalent than it is at present.

Up to the year 1900 not more than ten authentic cases of uncinariasis were on record in American literature, though there are statements by Southern physicians in the writings of the early part of the nineteenth century which leave little doubt that the disease was then prevalent.

During 1900 and 1901 only nineteen cases of the disease were reported, but in 1902, following the publication of Stiles' monograph on "The Significance of the Recent American Cases of Hookworm Disease in Man," the number of reported cases rose at a bound to 524. In 1903, 273 cases were reported; in 1904, 334; the number this year will probably not be so large, as the disease is no longer a rarity to Southern physicians, and they will not be so apt to record cases. Prior to 1900, then, possibly ten authentic cases of hookworm disease had been reported; since this date I have been able to collect from the available American literature 1,212 cases, of which 1,095 originated in the United States, and 117 were imported from other countries, mainly from Porto Rico and the Philippines. Of the latter 62 are reported by Gunn, and occurred in San Francisco, mainly among Porto Ricans.

If we separate the domestic from the imported cases we find that this disease is distributed mainly through the Southern States along the seaboard from Virginia to Texas. But it is not confined to seaboard States, for Missouri and Tennessee are also infected. The States in which the disease is known to be indigenous, and probably widely distributed, are Virginia, North and South Carolina, Georgia, Alabama, Florida, Louisiana, Texas, Mississippi, Missouri and Tennessee. This list of States includes only those in which definite evidence of the presence of the disease has been furnished; it does not include, I think, all of the infected States. Taking into account the similarities of soil and climate, anyone who will take the trouble to make a map of the known infected area will feel convinced that Arkansas, Indian Territory, Oklahoma, West Virginia, Kentucky, and the southern portions of Illinois, Indiana and Ohio are also probably infected. The physicians in some States have shown a lamentable lack of enterprise in investigating this disease, while in other States extensive and valuable studies have been made of it. As I have already stated 1,095 cases of domestic uncinariasis have been reported since 1900; 824 of these have been observed in three States, Georgia, Alabama, and North Carolina. This has been due to the interest and energy of single physicians, in Georgia of Claude A. Smith, Warfield and Harris; in Alabama of E. D. Bondurant, and in North Carolina of Nicholson and Rankin. A knowledge of the distribution of the disease is not merely of academic importance, for the economic aspects of uncinariasis are paramount. There is little doubt that the stigma of laziness and general inefficiency which has attached for generations to the so-called "poor whites" of the South has been earned by them not as a result of qualities due to innate "cussedness," but because a large percentage are suffering from uncinariasis with the resultant physical and mental deterioration. This being the case, a plotting out of the infected areas is one of the first steps which must be taken preparatory to

stamping out the disease. This is only one step, however, the others depending on our present conception of its method of spread. At present there are two main theories as to the means by which the parasite gains entrance to the body, the one presupposing that it enters through the alimentary canal, the other that it gains entrance through the skin. The advocates of the former theory hold that polluted drinking water, and food soiled by dirty hands are the means of introduction, the advocates of the latter, that the so-called "ground itch" is the point of entrance of the *Uncinaria rhabdites*. There is a good deal of evidence in support of both views, though the work of Claude A. Smith and of Nicholson and Rankin favors the idea that the cutaneous form of infection is the more important. In view of this the wearing of shoes, especially during the rainy season, becomes the most important prophylactic measure, though the necessity for pure water supplies and the proper disposal of excreta still remains of great importance. In all such matters the enforcement of hygienic laws can never be obtained without education of those who are at fault. As uncinariasis is essentially a country disease (I have not been able to find on record a single American case which originated in a city), the question is one which must be dealt with by the country physician, on whose back falls a heavy load of responsibility. The stamping out of this disease is, of course, of great economic importance to the South, but, further than this, the question arises whether it may not be of importance to other parts of the country. Is there any chance that uncinariasis may become more widely distributed than it is at present? The question is a hard one to answer. While there has not been a lack of physicians who have predicted such a spread, it cannot be said that there is much actual evidence that it has occurred. There are a few instances in American literature in which the evidence plainly points to infection of natives from imported cases. Such, for example, are some of the cases reported by Möhlau in Buffalo, where Polish and Italian laborers contaminated a brickyard. That such sporadic outbreaks can and will occur cannot be denied, and physicians all over the country should be on the lookout for them. Whether the disease will ever become widespread outside of its present habitat is quite another story. It must not be overlooked that a variety of circumstances are necessary to its spread; the right kind of soil, sufficient heat, and enough moisture for the parasite, and a lack of certain hygienic precautions on the part of the inhabitants of the area to be infected. The absence of any one of these conditions may be fatal to the dissemination of the disease. Considering the fact that uncinariasis has existed in the South for at least 100 years, and probably longer, it does not seem very probable that it will ever extend much beyond its present limits. What is needed at present then, is a more accurate knowledge of its

distribution, and the inauguration of an educational and sanitary campaign to effect its extermination.

Dysentery.—One of the first diseases which the American army surgeons in the tropics had to confront was that scourge of camps, dysentery. The study of the acute form of the disease had received a great impetus from the work of Shiga in Japan, and the investigation of this condition in the American troops in the Philippines, instigated by Flexner, has since been carried on by Strong and Musgrave, J. J. Curry, and Charles H. Craig. It can fairly be said, I think, that our conception of the etiology of dysentery, and particularly of the tropical form, has been completely revised in the last few years, and this revision has depended, in no small measure, on the work of American investigators. So far as tropical dysentery is concerned, the studies of recent years have taught us to recognize two distinct forms, the bacillary and the amebic. The bacillary form, of which the acute dysentery of the tropics represents the most common type, is due to an organism first described by Flexner, and closely allied to the bacillus described by Shiga in the epidemic dysentery of Japan. In the chronic forms the ameba seems to have held its ground as the main causal agent, though the earlier investigators in the Philippines seemed inclined to think that it was usually a secondary invader. Our knowledge of the life cycle of the ameba, of the differentiation of pathogenic from non-pathogenic forms, and of the cultivation of the organism, has been achieved in the past few years, and is associated with the names of Craig, Strong and Musgrave, and Caspar Miller. A more exact knowledge of the complications of dysentery has also resulted from the work of our army surgeons, and it is to be especially noted in this connection that the so-called "tropical" abscess of the liver is nearly always due to the amebic as opposed to the bacillary form.

The most surprising and unlooked-for result of the stimulus given to the study of dysentery has been the discovery that the same group of organisms which are responsible for tropical bacillary dysentery are also concerned in dysentery in this country, and in certain forms of the summer diarrheas of infancy. The first steps in determining these relationships were taken under Flexner's guidance during 1902. In that year Vedder and Duval published the result of their work on the dysentery of the United States, work which was based on both sporadic and epidemic cases, and which showed that certain types of dysentery all over the world were due to the Shiga group of bacteria. In the same year Duval and Bassett published their preliminary announcement of the isolation of bacteria of the same group from cases of infantile summer diarrhea. Subsequent studies, conducted mainly at the large centers in the East, have, in the main, confirmed these observations,

and have led to more accurate knowledge of both the clinical and bacteriologic aspects of these two classes of disease. Since 1903 investigation has been mainly focussed on the summer diarrheas of infancy, the scourge of the tenement districts of the large cities. These studies have resulted in the classification of the *Bacillus dysenteriae* into three main types, a differentiation which was suggested in part by Gay and Duval in 1903, and which has since been rendered more exact by the work of Hiss and Russell, and that of W. H. Park and his associates. On the clinical side it has been shown that all classes of summer diarrhea are not due to organisms of the dysentery group, but that certain types associated with mucus and blood in the stools are nearly always associated with them. It has also been shown that these organisms, like the pus cocci, may give rise to primary infections, or may play the rôle of secondary or terminal invaders. Mild cases without blood in the stools may also be due to this group of organisms, accurate and early diagnosis only being possible in any type of case by means of a bacteriologic examination of the feces. The serum reaction, while of some value, appears late in many cases, and is not available for early recognition of the disease.

In his report on Philippine dysentery Flexner suggested the possibility of serum therapy in these cases, and the discovery of the relation of the *Bacillus dysenteriae* to infantile summer diarrhea led to attempts at the production of a curative serum. During 1904 such a serum was used in a number of outbreaks of dysentery and summer diarrhea. The results, as a whole, have been disappointing, and will probably improve as we gain in experience. As Booker pointed out in 1903, little is to be expected from the serum in cases in which marked anatomic lesions are present. The work done under the Rockefeller Institute and summarized by Holt shows that the serum to be of value must be used early and in repeated doses. Judging from the results of Shiga in Japan more is to be expected for the serum treatment, and, as a matter of fact, it has not yet received a fair trial in this country. At present we need more knowledge regarding the natural history of the dysentery germ, its method of introduction, and the distribution of this form of infection in the United States. As regards the means by which the germ is introduced into the body there is already some evidence, both from the Philippines and this country, that contaminated water is at fault, but the whole matter needs more thorough investigation. The distribution of this form of infection has hardly been studied outside of the large cities of the East, and although the severe forms of infantile diarrhea are almost unknown on the Pacific Coast, there is little doubt that they exist in the South and Middle West.

Yellow Fever.—At the time that the Island of Cuba was occupied by American troops in 1898, yellow fever had been endemic there for 130

years. The disease was not widespread, but was mainly confined to the coast towns, and was particularly prevalent in Havana, the continuous stream of non-immune Spanish immigrants serving to keep up the infection. A great deal of study had been devoted to the disease at this time, and in the years immediately preceding the Spanish war renewed interest had been awakened by the work of Sanarelli, who claimed to have found the causal agent in his *Bacillus icteroides*. His claims had met a good deal of opposition, especially from Sternberg in this country, and many yellow fever experts did not accept his results. In view of the prevalence of the disease, and the constant menace which it offered to our Southern States, a commission composed of Walter Reed, James Carroll, Jesse W. Lazear, and Aristides Agramonte was detailed to Cuba still further to study it. The commission presumably started out with a disbelief in Sanarelli's work, for certain of the members had published investigations showing that the *Bacillus icteroides* was closely allied to, if not identical with, the hog cholera bacillus. While Sanarelli's work was repeated as a necessary precaution, and was proved to be erroneous, the commission concentrated its efforts on the investigation of the relation of the mosquito to yellow fever, a relationship which had been insisted on by Carlos Finlay, of Havana, for nearly twenty years, and which the work of Carter on the time limit between primary and secondary cases rendered probable.

It is not necessary to go into details as to the methods used by the commission in their work, further than to state that they were scientifically above reproach. It will be of interest, however, to consider their results, and the influence which they have had on the practical aspects of yellow fever quarantine. Briefly stated these results were as follows: The proof that Finlay's conception that yellow fever is conveyed by a certain variety of mosquito (*Stegomyia fasciata* of Theobald) is correct. The demonstration that a certain time must elapse after the mosquito is infected before it can transmit the disease; that the causal agent is in the blood during the first few days of the disease, that it can be destroyed by heat, and that it can pass through filters which hold back some of the smaller forms of bacteria. The explosion of the old idea that the disease can be conveyed by fomites, unless these are of a character to allow of transmission in them of infected living mosquitoes. These are the main results, and they have led to greater accuracy in our knowledge of the incubation period of yellow fever, increased study of the yellow fever mosquito, and an entirely new conception of the prevention of the disease. Since the original work of Reed, Carroll, Lazear, and Agramonte several independent observers have confirmed their findings, notably Cuñeras in Cuba, Marchoux, Salembini, and Simonds in South America, and the working parties of the

U. S. Public Health and Marine-Hospital Service in Vera Cruz, Mexico. The investigations carried on under the Public Health and Marine-Hospital Service have also supplied many details extending our knowledge of mosquito transmission, of the life history of the yellow fever mosquito, and of quarantine methods against the disease. Few discoveries in medicine have led to more rapid and more brilliant practical results than those above cited. The story of the remarkable change in the yellow fever history of Havana achieved by the work of Gorgas reads almost like a romance. When we consider that the annual number of deaths from yellow fever in Havana for the ten years preceding the establishment of the mosquito theory averaged about 500, and that under Dr. Gorgas' administration they were cut down in two years to nothing, we can enthusiastically echo the sentiments expressed in a resolution of the conference of State and Provincial Boards of Health, in which they say: "We regard (it) as one of the most brilliant achievements of the application of sanitary science to public health work ever accomplished." Judging from recent reports it seems likely that Gorgas will repeat his Havana success in the Isthmian Canal zone. We have still to discover the cause of yellow fever, and we have still to ward off its advances in our Southern States. So long as our Central and South American neighbors pursue their present lax sanitary methods we are liable to have sporadic outbreaks of the disease in those regions in which the *Stegomyia fasciata* can multiply. As Carter and Howard have shown, this mosquito is widely distributed in the subtropic portions of our country, and it behooves us to continue with the work of mosquito extermination, to increase its range as rapidly as possible, and to keep up with its oldtime strictness and quarantine vessels, especially sailing vessels, from infected ports. The protection of our land boundaries to the South will, of necessity, be much more difficult, and judging from the recent experience in Texas, it is by this route that infection is now most likely to reach us.

Malaria.—The soldiers returned from Cuba and Porto Rico, and later those from the Philippines, offered an opportunity for the study on a wholesale scale of certain aspects of malaria, an opportunity which was grasped by both military and civilian physicians. During and immediately following the Spanish War the accomplishment of greatest importance resulting from this study was the overthrow of the refuge of the careless diagnostician, typho-malarial fever. Those physicians who had studied malaria and typhoid fever carefully before the war, and who had controlled their diagnoses by blood examinations, had always been skeptical about the existence of combinations of the two diseases, and had published from time to time protests against the indiscriminate use of the term typho-malarial fever. It needed the studies of the

camp fevers, however, to prove to the satisfaction of most physicians that the combination was exceedingly uncommon, and that when it occurred the malarial fever preceded, or more commonly, followed the typhoid fever. In his remarks on the subject, based on the examination of the blood of 159 typhoid cases at Camp Wikoff, Ewing says: "In no case of undoubted and established typhoid fever were malarial parasites found in the blood in connection with any of these sudden rises of temperature (in typhoid), but only at the onset of the disease or during convalescence," and later in his article, "In short, in spite of painstaking effort, the attempt to find a case of typhoid fever and active malaria progressing simultaneously was unsuccessful." Aside from this, the clinical study of the disease has received but few important additions since 1898, though mention must be made of the valuable studies of Craig on latent and masked malaria, studies which showed how great the danger to a community might be from soldiers returned from the tropics. In his article published in 1904 Craig states that 25 per cent. of the soldiers returning from the Philippines show latent or masked infections, and in a large percentage of these cases the parasite is the estivo-autumnal crescent, a stage of the organism capable of development in the mosquito. The same observer cites one company of 60 men in which 41 had parasites in their blood, and yet but 14 complained of illness.

As far as the parasitology of malaria is concerned, the past seven years have been marked by great simplification in staining methods, but discoveries of paramount importance have not been numerous. The studies of Craig on estivo-autumnal fever have tended to confirm the views of the Italian school as to the duality of its parasite, and the work of Ewing on the tertian parasite has thrown light on its early sexual history in the circulating blood. Working Party No. 2 of the Yellow Fever Institute has been able to show that at the time of the malarial chill there is present in the blood a toxin, and have been able to produce a chill by the intravenous inoculation of filtered blood extracted during the paroxysm.

The study of the distribution of the malarial mosquito has been carried on in a few places, in Boston by Theobald Smith, in the Valley of the Androscoggin by Jordan, and in Baltimore by Hirschberg and Dohme, but the amount of work which has been accomplished in this direction, and the time and money which have been expended in the attempt to exterminate the malarial mosquito, is almost infinitesimal when we consider the territory affected by the disease, and the losses resulting from it. Woldert estimates the annual financial loss in Texas alone at over \$5,000,000, and if all the infected zones in the United States are considered the loss must be appalling. Like yellow fever, malaria is a perfectly preventable disease, but to stamp it

out requires either destruction of malarial mosquitoes, or protection and sterilization of infected individuals. In this country mosquito extermination has always been the favored plan, but before it can be accomplished a much more complete knowledge of the distribution of the *Anopheles* is necessary, and much more thorough education of the public as to the necessity of the work. The danger that the disease may be introduced into uninfected areas by soldiers returning from the tropics is a real one, though, as Theobald Smith has shown, it is unlikely that the estivo-autumnal parasite will be introduced into the Northern States. Still, we have plenty of Southern territory not yet infected, and the extermination of mosquitoes would prevent the possibility of such contamination. The question is one which has not yet been seriously considered in large sections of the country, but is, nevertheless, of the greatest importance.

Filariasis.—The work of Ashford in Porto Rico, and of Calvert in the Philippines has shown that filariasis exists in both places. In Porto Rico it is probably widely distributed, as Ashford found it in 30 out of 250 soldiers in the Porto Rican regiment. Cases of Gunn and of Brown have shown that infected individuals from this source have already reached this country. In the Philippines the extent of the disease is doubtful. Calvert found the filaria in only two out of 426 Filipinos, but it is to be noted that both of these individuals came from the same district, and it is likely that the disease is much more prevalent in some places than in others. In this country several domestic and imported cases have been reported since 1898. It seems extremely likely that the disease is much more common in the South than the literature would indicate, and that it is often overlooked. The fact that one man, De Sassure, of Charleston, was able to report 22 cases, most of them originating in the United States, is pretty strong evidence that the disease is much more prevalent than is generally supposed. It is certain that there are present in this country varieties of mosquito capable of transmitting the filaria. As these generally belong to the *Culex* family, which is widely distributed throughout the United States, it seems possible that there is real danger of new districts becoming infected by returning soldiers or Porto Rican laborers. Before the matter can be definitely settled we need more information as to the exact varieties of mosquito which can transmit filariasis, and their distribution in this country. At present it is quite generally assumed that a number of varieties of *Culex*, and at least one of *Anopheles* can transmit the disease. We believe it was Myers who brought forward evidence to the contrary, and the matter is one which needs further investigation.

Malta Fever.—The fact that Malta fever was present in Porto Rico was first demonstrated by Musser and Sailer, and later by Cox and

Curry. In 1900 Strong and Musgrave called attention to its occurrence in the Philippines, and still later cases occurring in returned soldiers were described by Curry and Craig. The number of cases which have been described is small, and practically all of them are in soldiers and sailors. In the seven years which have elapsed since the first case was reported in this country, no case originating here has been described, and it seems that there is little likelihood of the disease becoming disseminated in the United States. It is within the bounds of possibility, as Curry pointed out, that it already exists in the Southern States. In its acute form it is easily confounded with malaria, and in its chronic stages it is generally diagnosed at first as chronic rheumatism. The serum reaction of the disease is so reliable, and the test is easy of performance, that all cases with doubtful fevers in the Southern States should be subjected to it. It seems highly probable that if this is done systematically the disease will be found to be present.

Trypanosomiasis.—The relation of trypanosomes to animal diseases was observed in the middle of the last century, and renewed interest has been awakened in these parasites in recent years by the discovery of new forms of animal trypanosomiasis initiated by the work of Dutton. The presence of the trypanosome infection known as surra among horses and buffalo in the Philippines was noted soon after the American occupation, and the results of American researches on this disease may be found in the valuable monograph of Musgrave and Clegg. Up to 1903 attempts to isolate trypanosomes in pure culture had been ineffectual, but in that year McNeal and Novy published the results of their work on the rat trypanosome. They were able to obtain the first successful pure culture of a pathogenic animal parasite with the absolute demonstration of its causal relation to the disease. Up to this time many observers believed that the different forms of animal trypanosomiasis were due to the same organism, but during 1903 and 1904, Novy, McNeal and Ward were able to cultivate the trypanosome of nagana or tsetse disease, and also that of Philippine surra, and could demonstrate that the parasites from these different diseases showed variations in structure and mode of growth. Later Lewis and Williams succeeded in cultivating the frog trypanosome, showing that this also differs from the other forms. Some forms of animal trypanosomiasis have appeared in the United States, dourine having been observed in Nebraska. Whether there is any possibility of the introduction into America of human trypanosomiasis will be difficult to determine until we know more of certain forms parasitic in man, and the method of their spread. The form of the disease which is most likely to appear in this country, is the affection known likely to be found in the Philippines, and hence most in India as kala-azar or dum-dum fever. The parasite of this disease, usually spoken of as Leish-

man-Donovan body, has recently been shown by Rogers and Chatterjee to belong to a subfamily of the trypanosomes. The method of transmission of this form of the disease to man is not definitely known so far as we can determine; it is probably transmitted like nagana by an insect, most likely a mosquito. The possibility of its introduction into this country will probably depend on the presence or absence of some insect host.

Dengue.—A disease which does not seem to have received the study which it merits, considering its frequency, is dengue, or break-bone fever. The Reports of the Surgeon General of the Army for 1902 and 1903 show that in the Philippines it caused, in the former year, 31.67 cases of sickness per 1,000 of strength, and in the latter year 171.39 cases per 1,000 of strength. Presumably it has not been carefully studied in the Philippines, or in the South, where it also occurs, on account of its short duration, and the almost absolute lack of fatalities. In the Isthmian Canal Zone it has been studied in the last two years by Sutton and Carpenter. They have shown that it is probably not of the malarial class of diseases, but that it may, as Graham claimed, be transmitted by the mosquito. Their studies of the blood show that it is one of the diseases accompanied by leucopenia and relative lymphocytosis, and their bacteriologic studies suggest that a bacillus similar to the influenza bacillus may be the cause. The disease is one which, judging by its history, is unlikely to spread beyond the southern parts of this country. It is worthy of more extended study by modern methods than has yet been devoted to it, and American physicians in the Philippines and the Isthmian Canal Zone will probably have excellent opportunities to clear up many moot points in connection with this disease.

Asiatic Cholera.—During 1902 Asiatic cholera appeared in Manila, spread to the neighboring islands, and caused over 90,000 deaths before it was stamped out. The incidence of the disease among the whites was comparatively small, but among the natives it ran rife, owing to their lack of hygienic precautions and the favorable temperature conditions. In many instances the disease was not carried, as usual, by contaminated water, in fact, in the large cities indirect contact through food was a much more frequent method of spread. On account of the violent local reaction produced by Haffkine's cholera prophylactic the natives objected to its use, and as the scattered distribution of the population made it almost impossible to control them, this method was given up. The objections to Haffkine's prophylactic lead R. P. Strong to attempt the production of a protective serum lacking in the irritating properties of those hitherto used. By a process of bacterial autolysis followed by filtration of the culture he was able to produce a practically non-irritating protective. From the experimental standpoint Strong was able to show

that animals and men treated by this method showed but little local reaction, yet developed in their blood substances strongly bacterial to the cholera spirillum. As the cholera had practically disappeared from the Philippines at the time that Strong's work was completed there has as yet been no opportunity to put his method to a practical test. From what we know of the disease there is little likelihood that it will ever get a foothold in this country under our present quarantine regulations.

Plague.—The appearance of plague in several parts of the civilized world in 1900, and especially its appearance in San Francisco and Philippines, called the attention of American medical men to this disease. Luckily, but few of them had an opportunity to study it, and most of the American work on this disease has been done in the Philippines, where, according to Munson, 970 cases with 812 deaths occurred between January, 1900, and September, 1903. It cannot be said that anything startlingly new was discovered during this period, but a good deal of valuable confirmatory work was turned out. In this connection must be mentioned the work of Barker, Flexner and Novy on various aspects of the subject, the work of Calvert and Ewing on the occurrence of plague bacilli in the circulating blood, and the work of Herzog and Hare on latent and ambulatory plague. The outbreaks of the disease in Australia, in Honolulu, in Glasgow, and in San Francisco have served to warn us of the necessity of being constantly on guard against its insidious approach. The recent outbreak in Leith, in which, as in the San Francisco outbreak, the origin of the disease was in doubt, shows us that at all our seaports constant vigilance must be maintained, and this must be the case so long as endemic foci are present in Asia. In the preventive work in this country, in this as in other infectious diseases, too much praise cannot be given to the officials of the U. S. Public Health and Marine-Hospital Service who, besides having to bear the burden of their appointed work, have often also to suffer the slings and arrows of outrageous politicians, and the contumelious taunts of misguided citizens.

Conclusion.—We have now considered the more important of the tropical diseases which occur in Porto Rico, the Philippines, and the newly acquired Isthmian Canal Zone, the effects which their study has had on American medicine, and the chances of their becoming domiciled in this country. It has been possible to touch on many important subjects but lightly, and I ask your indulgence for the sketchy manner in which the subject has been treated. Of necessity a number of tropical diseases have not been mentioned, tropical ulcer, frambesia, bilharziasis, and blackwater fever, for example. These diseases are all present in our tropical possessions, but are of relatively minor importance, and as yet have received but little attention from American observers. Two general conclusions are forced on

us as a result of this study, one being that many of the so-called "tropical" diseases are widely scattered through the subtropical portions of this country, the other that the acquisition of tropical possessions by the United States has had a markedly stimulating effect on American medicine, and has led to valuable work, some of it of the very first rank, all of it showing evidences of earnest and painstaking effort.

ORIGINAL ARTICLES.

THE TREATMENT OF DIARRHEA IN CHILDREN.¹

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LACK of precision in terms is the root of confusion in treatment.

Dysentery, an infectious, contagious, epidemic, water-borne disease; characterized by tormina and tenesmus, and by blood and pus in the stools, is not included.

Diarrhea with blood and mucus in the stools is often erroneously denominated dysentery. By no process of extension, transition or evolution does diarrhea ever become dysentery, as is now authoritatively stated, with no credible basis. For dysentery there must be specific infection—a specific micro-organism.

If a child with diarrhea contracts dysentery, there are two entirely distinct, coexisting diseases in one patient; they are as distinct as they would be if they occurred in two patients.

This definitive elimination clears the decks for *decisive, direct* therapeutic action.

During seventeen summer weeks in 1903, Brooklyn and Manhattan had 2,755 deaths from diarrhea; during the same period in 1904, 3,810 deaths. A notably cool, salubrious summer, registered a death-roll from a minor affection, which not only unsettles and staggers the practitioner, but also casts a shadow across our science.

Mr. President, this is an effaceable mortality column.

Diarrhea is purely a food disorder. Therefore, preventable. At inception, prompt, appropriate treatment, unfailingly arrests it at once. Therefore, it should never be fatal. It registers more deaths than all the contagious exanthemata combined. Mismanagement of feeding is the cause.

In young infants, barley water, rice, water, egg water, etc.; in older children, animal broths, continued until vitality is at such an ebb that there is fatal collapse, have produced a mortality record from a simple local irritation, which is not only infamous, but iniquitous.

The marvel of this complaint is the simplicity of successful management, viz., removal of the cause, feeding adapted to the condition.

Removal of Cause.—Fermenting food (soon putrescent), a lurking menace, must be ejected promptly, radically, entirely, to prevent a mere local affection becoming a profound constitutional infection, *through the great activity of the intestinal absorbents.*

Difficulty of Removal of Cause.—Numerous transverse folds in the intestine, two inches in length, two-thirds of an inch in depth (for impending propulsion of food and expanding absorbent area), make it difficult to dislodge and drive out the putrefying, irritating material.

The instrument of eviction must be as searching, as scouring, and as potent as a chimney sweep or a scavenger.

The cause, milk curd, sour milk, unripe or overripe fruit, fruit skins, bolted boluses, morsels of sweets, sausage, cheese, cabbage, sauerkraut, etc. (entrapped under, concealed and shielded by an intestinal food—*enhance physiological, accentuate pathological processes*); the cause thrust out, the irritated parts must have a period of rest—unconditional, absolute, motor and chemical.

Being the food-path does not debar literal observance of this first therapeutic law—punctiliously enjoined, jealously, religiously enforced, as in other irritated and inflamed structures.

Rest must be assured, unquestioned because unquestionable, until fermentation ceases, and the injured and irritated mucous membrane at all points and in all valvular pockets has healed.

It is prerequisite, therefore, during this transition stage, or period of probation, that nothing be allowed to pass through the digestive tube but water.

While there remains any trace (cause or consequence) of the original disturbance, food is as a spark in a powder magazine. In this functionless state the blandest nutriment eternizes fermentation. Escape from mortal issue is cut off. Feeding while disorder lingers is fatal error.

The only adequately exploring, extruding agent is castor oil.

To a child of three months and of six months, one teaspoonful; to a child of nine months and of one year, a desert spoonful; to a child of one year and a half and of two years, one table-spoonful. The oil must be ice cold.

For two hours before and two hours after, nothing else must go into the stomach—not even water. If the oil is rejected the same dose must be repeated in one hour.

Not infrequently an irritating mass is incarcerated in a valvular pocket. To abate spasm and liberate this, opium is indispensable—a solid, hardened dejection then passing downward carries with it the released material. Opium has obviated sepsis!

The only legitimate use of opium in diarrhea, is for the surrender of imprisoned, decomposing, septic material. If this remains, the issue is fatal.

¹ Read before the New York County Medical Society at the New York Academy of Medicine, May 22, 1905.

After the detergent, cleansing, purifying action of the oil has ended, for at least another twenty-four hours only water is to be given. In severer cases thirty-six, forty-eight, sixty, or even seventy-two hours must elapse before the maimed intestine can be safely intrusted to perform any digestive function. Feeding while disorder lingers is fatal error.

In young infants hot water, and from a bottle, is preferable. Where there is great irritability of the stomach hot water is more soothing than cold. Some infants, and most older children prefer cold water. Heed preference. When there is high temperature cold water is grateful and of therapeutic value. Very hot water from a dropper, three or five drops on the tongue every fifteen minutes, is at times magical in its effect in checking vomiting.

The rest and restoration period over, the pivotal part of the management begins, namely, feeding. The food must be a modified and weakened form of that which is physiological for a well child of the same age. Unphysiological feeding is unmitigated egotism. He is indeed a hopeless pigmy who places his fallible opinions and conclusions above Nature's infallible laws! To give barley water and dextrinized cereal to a young infant in health or disease, is such express contravention of physiology as to be stultifying.

This incomprehensible blunder has lowered the colors; shattered faith which should be unbound, unassailable.

Feeding.—Proteid excess is the eminent peril of the young child in summer; it is pre-eminently of evil repute when digestion is disordered or enfeebled. Proteid excess has placed an unwarrantable, an utterly indefensible ban on milk feeding in diarrhea; foisted in the proprietary banes; the illogical, inane and pernicious dextrinized cereals.

After clarifying with oil, flushing and sweetening with water, milk, with the proteid content minimized temporarily, later strengthened under clear insight, is the only sure, safe, ever unfailing resource in diarrhea in a child under one year.

The auspicious moment for food having arrived, written instructions—never verbal—are to be placed in the hands of the child's attendant.

Feeding a Child of Three Months with Diarrhea.—Take the upper one ounce of cream from a quart bottle of milk which has been standing on ice for sixteen hours from the time of milking. (Immediately after milking, the milk must be put in the regulation quart glass milk jars of commerce, and placed on ice for sixteen hours before lifting the cream.) In metropolitan centers the milk bottles must be kept on ice for six hours after they are delivered in the morning by the milkman. It is not possible to secure the top ounce of cream by any device other than with the keel-shaped dipper of the Noël Nursery Table.

This one ounce of cream must be kept on ice

until it is to be used. Mix one teaspoonful of this cream with one ounce of cold, unboiled, filtered water, and then add two teaspoonfuls of lime water. Of this mixture give one ounce every four hours.

Midway between each feeding, the baby is to be given water from a bottle, hot or cold according to taste, one or two ounces as desired (food and water alternating every two hours). Filtered unboiled water is always to be used. This feeding is to be continued for at least twenty-four hours.

If at the end of twenty-four hours of such feeding there is evidence of intestinal fermentation, the same feeding is to be continued for another twenty-four hours. If, however, at the end of the first twenty-four hours of this feeding the child is doing well, with no indication of disturbance of digestion, the one ounce of food prepared as above is given every two hours, and the water discontinued.

It is of great importance to bear in mind that digestion is not *only* a chemical, but a mechanical act as well. *Not one drop of water is ever absorbed from the stomach*, therefore, when water is put into the stomach there must be the same amount of muscular contraction as for food, in order to force it into the intestine where it is absorbed.

This mechanical act alone may cause exhaustion of the nervous centers. Many well children are made ill by giving water too frequently; many ill children are kept from recovery by the same mismanagement. Frequent muscular contraction of the stomach from water too frequently given causes atony of the stomach and inability to carry on digestive processes.

At the end of the second twenty-four hours of feeding at two-hour-intervals, of one ounce of the above composition, if the child is perfectly well, and evidently not satisfied—as it probably will not be, the quantity but not the strength, is to be increased. Now give $1\frac{1}{2}$ ounces every two hours.

At the end of another twenty-four hours, if digestion is good, the strength is increased. Here lies the most important point in the management. Continue to use the upper one ounce of cream from the top of a quart bottle of milk, and in order to get sufficient quantity for the twenty-four hours' use, take the top ounce from two, or possibly three quart bottles of milk, that a minimized proteid food may be secured.

Use two teaspoonfuls of this cream to $1\frac{1}{2}$ ounces of cold, unboiled, filtered water, and to this add one-half ounce of lime water. Of this stronger food give two ounces every three hours.

After two days of this feeding, if the patient is in every way doing well, the food may be strengthened by taking the upper two ounces from one, two, or three quart bottles of milk sixteen or more hours after milking. Of this, use at each feeding one-half ounce, mixed with two ounces of cold, unboiled, filtered water, and

add to this one-half ounce of lime water. Give three ounces of this every three hours, seven feedings in the twenty-four hours.

From this time the changes are made very gradually until the food is of normal strength for a child of three months. It must be borne in mind, however, that after even a slight intestinal disturbance, the predisposition to enfeebled digestion remains until the end of the summer period. The food must be of *low proteid* until the cool autumn weather.

Feeding a Child Six Months of Age with Diarrhea.—Take the upper one ounce of cream from each of two quart bottles of milk sixteen or more hours after milking. Of this cream use two teaspoonfuls mixed with $1\frac{1}{2}$ ounces of cold, unboiled, filtered water, and then add three teaspoonfuls of lime water. Give a six-months-old child $1\frac{1}{2}$ ounces of this food every four hours, alternatively with $1\frac{1}{2}$ to 2 ounces of water every four hours.

This older child will probably require a larger amount of liquid, and consequently it will be necessary to give a larger quantity of water every four hours. A six-months-old child with better muscular development, may take with impunity a larger quantity of water than a three-months-old child.

At the end of twenty-four hours of this feeding, if all evidence of disturbed digestion has disappeared, prepare the food as follows: Take one-half of the upper one ounce of cream, mix this with three ounces of cold, unboiled, filtered water; to this add one-half ounce of lime water. Give three ounces of this every three hours, the water which has previously been given to be discontinued. If the three ounces do not satisfy, and the baby must have more liquid, water should be given immediately after feeding, but not between feedings. Water must not be given in the intervals of the three hours. This would keep up continuous muscular contraction and again lead to exhaustion. There must be a rest-period of three hours.

This régime should continue for about forty-eight hours, when the food may be strengthened by taking the upper two ounces from each of three quart bottles of milk sixteen or more hours after milking, or in town six hours after it is delivered in the morning by the milkman.

Of this two ounces, use for each feeding one ounce, mixed with $3\frac{1}{2}$ ounces of cold, unboiled, filtered water, and then add one ounce of lime water. Give four ounces of this every three hours. At the end of twenty-four hours, if digestion is normal, $4\frac{1}{2}$ to 5 ounces may be given every three hours; seven feedings in the twenty-four hours.

After three days of this feeding, the food may be strengthened by taking the upper four ounces from each of two or three quart bottles of milk sixteen or more hours old. Of this four ounces use for each feeding $1\frac{1}{2}$ ounces, mixed with $3\frac{1}{2}$ ounces of water, and one ounce of lime water.

Give this quantity every $3\frac{1}{2}$ hours; six feedings in the twenty-four hours. After two or three days of this feeding, the food may be gradually strengthened until it is of the strength for a child of six months. It should then be given every four hours; five feedings in the twenty-four hours.

Feeding a Child Nine Months of Age with Diarrhea.—The management is the same, except that the quantity, not the strength, is increased more rapidly, owing to the greater bulk required in a nine-months-old child.

Minimized proteid must not be relinquished: This abides as the supreme desideratum.

Feeding a Child in Second Year with Diarrhea.—Feeding which has thus far fulfilled each and every and all physiological and pathological indications, would now be fundamentally defective. The older child must have higher proteid.

The crippled organs cannot utilize higher milk proteid. Nothing is more intolerable to them. Vegetable proteid is now logical, valid, prerequisite, imperative.

Physiology dictates the addition of cereal to the food of a normal child at the sixth or seventh month, but the secretions for its digestion are not sufficiently developed to justify its use as the exclusive food in diarrhea, until about the twelfth month.

The anomalous mortality from diarrhea in young infants is artificial, and has as its principal cause the abnormal and singular use of cereals. In older children there is a spurious mortality superinduced by the misemployment of animal broths. Stress of diarrhea and growth make demand for constructive material paramount. Animal broth is destitute of constructive element; rich in extractives which stimulate metabolism while it should be conserved—the child wastes rapidly. Death ensues from a general starvation of every part. The young infant dies from inanition with angioneurotic edema on vegetable proteid, because he cannot utilize it. To parallel this, the older child is given as aliment that which is characterized by destitution of constructive element.

The pronounced tendency to renal determination is intensified by the rich content of muscle and bone extractiveness in broth. Physiological and pathological studies furnish final negatives; bedside reflections make them abhorrent.

Beef juice must be eschewed and interdicted. It causes the stools to become putrid, foul-smelling; looseness is aggravated; the delicate nervous organization overstimulated—every phase of the disorder is accentuated.

Vegetable proteid is the only tissue-forming material which the disqualified organs can utilize.

Cereal checks looseness, repairs waste, vitalizes languishing functions. Cereal is indispensable to the successful treatment of diarrhea in the second year. It must be the sole food in diar-

rhea from the end of the first year. with its use recovery is rapid, complete, perfect, permanent.

If a child is bottle-fed, the cereal should be given in the form of a gruel and from a bottle. If spoon-fed, the cereal should be given hot, and with a little butter and salt; never with cream or milk, and never with broth or beef juice added. It must not be given with sugar.

For a child of one year, give four ounces of gruel every four hours, five feedings in the twenty-four hours. If this quantity does not satisfy, water may be allowed midway between feedings. As this older child has better muscular development, water between feedings does not cause the same amount of exhaustion of the vital forces and of the nervous centers. There is, however, a limit, and great care must be taken that the child is not allowed quantities of water at frequent intervals.

The cereals of greatest value and most to be depended upon in diarrhea in the second year are barley (whole or pearl barley), Imperial Granum, arrowroot, rice, cream of wheat. They must all be cooked with water, never with milk.

Imperial Granum and arrowroot should be cooked thoroughly for one-half hour; pearl barley, three hours; rice, one hour and cream of wheat, one hour. They should all be salted as for the table, while cooking.

Barley, rice and cream of wheat should be strained. Imperial Granum and arrowroot need not be. The last two should be cooked fresh for every feeding; the others cooked fresh every twenty-four hours and kept in the refrigerator until needed. They should be served hot.

Mothers, nurses, and even physicians often say a child refuses cereal. Wait! Hunger soon compels them to accept it. A child never starves because the dictum of the palate is not subserved. Only that food which is sustaining and curative is ever permitted. When tissue-hunger makes demand, it is taken readily; until that time it is not needed.

The channel purified of sewage and made sanitary, the management and feeding prescribed and proscribed proves consummate, without fault or blemish, with no dark side—every case of acute diarrhea is well within one week.

Feeding of Neglected and Mismanaged Cases from Three to Nine or Ten Months of Age which Have Become Subacute or Chronic.—Cases that have been ill for weeks, possibly for months, until there is a chronic disease of the intestines, are the troublesome, stubborn, unmanageable ones, and are the cases that swell the death-rate. In this extremity, a happy consummation expiates the promulgation of a heresy—an unorthodox food. I have proved condensed milk in this class of diarrhea, with the result that conviction, and conscience compel recognition and advocacy.

In these neglected cases one of two things will save life—breast milk or condensed milk. A bottle-fed child of six or eight months can seldom be induced to take the breast.

With profound apprehension of the evil effects from the prolonged use of condensed milk; and despite prescience of consequent vehement criticism, I prescribe condensed milk in subacute and chronic diarrhea in young infants, inasmuch as it is the only food, except breast milk, that will save life.

For temporary uses in such cases it does incalculable good; its prolonged use does incalculable harm. Condensed milk may be made beneficial or baneful, conformable to its use or abuse. Judiciously used it will save life where nothing else can. Injudiciously used it is a prolific source of disease. I would not advocate its use had I not an experience of years during which it has not once failed me.

The clinical fact that infants who have been continuously fed on condensed milk for any prolonged period have an abiding predisposition to diarrhea of fatal type, does not deter me from having recourse to it in the restricted manner indicated, and in the cases alluded to, which I am confident are to become less frequent in the near future, owing to improved management, and rational, logical, physiological feeding.

How to Use Condensed Milk.—For a baby three months of age with subacute or chronic diarrhea, take one teaspoon level full of canned, sweetened condensed milk (scrape off the under-surface of the spoon), put it into a china vessel, add to this with a teaspoon, twenty-four teaspoonfuls of water which is actually boiling. One ounce of this should be used for each feeding. (The rest to be thrown away. Prepare fresh for every feeding).

After cooling to temperature for feeding, add two teaspoonfuls of lime water to one ounce of the mixture, and give this quantity (one ounce and two teaspoonfuls), every four hours.

This should alternate with one ounce of hot water and two teaspoonfuls of lime water, every four hours. (Water and food alternating every two hours.)

At the end of twenty-four hours of this management, the movements become less frequent and improve in character. After forty-eight hours, if improvement has progressed, the quantity may be increased to two ounces every four hours, with one-half ounce of lime water added. Alternate this with two ounces of hot water and one-half ounce of lime water.

After forty-eight hours of this management, if the movements have become normal, two ounces of the condensed milk mixture with one-half ounce of lime water, is given every two hours, and the water discontinued.

One week later, everything being normal, the food is strengthened by making it one teaspoonful to sixteen, or two, to thirty-two of boiling water. Give three ounces of this mixture, with one-half ounce of lime water, every three hours. This strength is not exceeded—one to sixteen—at any period during the condensed milk feeding.

The effect of this feeding is so miraculous in infants apparently hopelessly ill, that it is difficult to induce mothers or nurses to discontinue it when the patient has recovered. It is quite impossible to bring any mother who has experienced the effect on a prolonged, seemingly hopeless, case of diarrhea to a discontinuance of the use of condensed milk. The responsibility of the physician is great. The condensed milk must be stopped or that which saved the child's life will later lead to scurvy-rickets and to irremediable deformity.

Discontinuing Condensed Milk.—With the advent of propitious autumn weather, if digestion, movements, and appetite are good, condensed milk should be supplemented gradually, surreptitiously.

Instructions.—Take the top ounce from a quart bottle of milk, which has been standing upright on ice for sixteen hours from the time of milking, or in town six hours after it is received in the nursery. Keep this one ounce of cream on ice until needed. One teaspoonful of this cream is added to every second bottle of the condensed milk food, just before feeding.

After three days of this feeding, if the stools are normal, and the appetite good, one teaspoonful of cream is added to every bottle. One week later, or ten days from beginning the addition of cream to the bottle, if the appetite and movements are good, two teaspoonfuls of cream (top ounce from two quart bottles), are added to every bottle.

After continuing this feeding two weeks, the condensed milk is gradually lessened, the top cream gradually increased. It now becomes important to take more from the top of each quart bottle of milk in order that there may be a slowly increasing percentage of proteid in the food.

Feeding in Subacute and Chronic Diarrhea in the Second Year.—With cereal as the only food every case comes under control in a surprisingly short period.

In a bottle-fed child barley (whole barley) gruel, four to six ounces every four hours—five feedings in the twenty-four hours. If spoon-fed, cereals served hot, and with butter and salt every four hours—five feedings in the twenty-four hours. All other food is interdicted. Cold, unboiled water is allowed freely.

Irrigation.—This is an abused, overwrought treatment. Abdominal distention and mortal collapse consequent upon high, large, frequently repeated irrigations are unfortunately often encountered.

To supplement the action of castor oil it is sometimes expedient to irrigate on the first day. Repeated irrigations are exhausting and seldom advisable. These precepts are founded on the rock of experience. Administered faithfully, they will bring the frailest, disease-tossed, bark safely, securely to the harbor of health.

25 West Thirty-seventh Street.

TWO CASES OF EPILEPSY, THE RESULT OF GASTRO-INTESTINAL DISTURBANCE.*

BY FRANK H. MURDOCH, M.D.,

OF PITTSBURG, PA.

REGARDING the pathogenesis of epilepsy a well-known author has recently expressed himself as follows: "For some years the writer has been impressed with the facts forced upon him, not only as the result of the study of his own cases, but by the accumulated researches of Raymond Petit, Voisin, Smith and Herter, Mott and Halliburton, and later by Carlo Besta, and other Italian investigators, that toxemia enters more largely than is generally supposed into the pathogeny of epilepsy, and this is apparent, as Voisin has pointed out, in the general resemblance and mode of occurrence between the epileptic attacks, and certain ordinary forms of poisoning in which the nervous system is affected. In such cases the element of convulsion, and the mental disturbance have features in common, and it would appear that the occurrence of the fit betokens the accumulation in the body of some particular toxic agent, the unwelcome presence of which gives rise to a convulsion when the point of cell-tolerance has been reached. He also states that autotoxemia may occur in three different ways. First, in the existence of a toxemia of gastro-intestinal origin, which was described originally by Bouchard, and later by Herter and Smith, as well as by the author just quoted. Second, by the introduction of certain familiar cocci into the circulation, and third, the presence in the blood of a specific poison called cholin."¹

The cases which I wish to report were due to autotoxemia, one resulting from disturbance in the stomach, and taking the form of *petit mal*, the other being associated with intestinal disturbance, and taking the form of *grand mal*.

Case I.—Miss M. S., aged eighteen years, consulted me on June 21, 1904, and gave the following history: A year and a half ago she began to be troubled with vomiting during or immediately after meals, occasionally through the day, she suffered from attacks of nausea, and often at such times vomited a very sour fluid. Six months ago she lost consciousness for a few moments while at church, and similar attacks have been coming on with increased frequency ever since, so that for the last two or three months she has had an average of two or three attacks a day, and during the last two days she has had eight or nine attacks each day. There is a distinct aura which begins in both heels and passes up the posterior aspect of the legs, then along the spine, and when it reaches the lower dorsal region she experiences intense nausea, and endeavors to induce vomiting by passing her fingers as far back over the root of the tongue as possible. Simultaneously with the nausea she loses consciousness, for after the attack she has no

* Read at a meeting of the Gastro-Enterological Association, in New York, April 24, 1905.

recollection of having made an attempt to induce vomiting. She looks pale, and has lost twelve pounds in weight. Her menses are scanty and irregular. Appetite poor, bowels regular, bad taste in the morning. Inflation of the stomach shows that its lower border reaches the navel, and the right kidney is movable in the second degree. The gastric secretions are normal. The urine is acid, and contains neither sugar nor albumin. Her stomach in the morning before she has eaten anything, contains a large quantity of mucus mixed with bile. The treatment consisted in proper diet, iron and arsenic, and gastric lavage. It is a remarkable fact that after the first washing out of her stomach the epileptic attacks ceased, and I am glad to say, did not return. She spent the summer in the mountains, being careful as to her diet, taking the iron and arsenic, and washing out her stomach two or three times a week. I saw her on October 11, 1904, and she had gained ten pounds in weight, her menses were regular as to time, and sufficient in quantity, and in fact she was enjoying excellent health.

Case II.—On October 7, 1901, Mr. A. D., aged thirty-two years, merchant tailor, consulted me and gave the following history: Two years ago he began to suffer from frontal headaches, after the headache had lasted for three or four hours he began to vomit a greenish bitter fluid mixed with food particles. The vomiting continued for twenty-four or forty-eight hours, during which time he had to keep his bed. After the attack he felt quite well for three of four months, then, without any apparent cause, the headache and vomiting would return. Lately the attacks have been coming on every month. On the night of September 1, 1901, he vomited after having retired, but lay down and went to sleep again. Soon after, he woke a young man who happened to be sleeping with him that night, by having a violent convulsion. His friend went for a physician who was of the opinion that the attack was epileptic, as the patient was unconscious, had foam on his lips, and had bitten his tongue. On October 1, during the day, he had headache and vomiting, but no epileptic attack. His appetite is poor, bowels constipated. Examination shows that the apex beat is displaced, being $2\frac{1}{2}$ inches below, and 1 inch within the nipple line; liver normal, stomach and intestines contain much gas. When the stomach is inflated with air the lower border reaches a point $1\frac{1}{2}$ inches below the navel, and the ascending colon is considerably dilated. The gastric secretions are normal, free hydrochloric acid being + 32, total acidity, 68. The urine is acid, specific gravity, 1.020, and contains neither sugar nor albumin, but indican in excess. Treatment consisted in a regulated diet, and flushing the colon every day with normal salt solution. After beginning treatment the patient had no more headache or vomiting, and no further epileptic attacks. Now, it is impossible to tell whether

this patient had more than one convulsion or not, for, as is well known, when attacks come on at night a person may be epileptic for years without knowing it.

In regard to diet in epilepsy, Hamilton² says, "I have no reason to change my opinion, advanced nearly thirty years ago, and which has been shared by others, that an excessive nitrogenous diet is apt to aggravate the disease. Merson, adopting the idea of Hughlings Jackson, that it is the nitrogen that leads to explosiveness and instability, conducted a series of experiments at the West Riding Asylum, which showed that a meat diet, not only produced a dull languid condition with an increased temperature, but that the attacks were more frequent." Burney Yeo³ is of the opinion that epileptics should not have meat more than once a day, and at the Craig Colony for Epileptics in New York, patients are allowed meat once a day every day in the week except Friday.⁴

It has been my experience that patients with achylia gastrica do better on a diet from which red meats have been excluded, while in hyperchlorhydria the reverse obtains. It would be interesting to know the state of the gastric secretions in those epileptics in which the disease is aggravated by a nitrogenous diet.

Of the several forms of diet recommended in epilepsy, Turner⁵ has found that of salt starvation the most satisfactory. The chief feature of the method lies in the diminution of the bromide dose, from 20 to 30 grains of one of these salts at bedtime being sufficient.

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THREE ADDITIONAL CASES OF PRIMARY SARCOMA OF THE STOMACH.¹

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YOUR president has been kind enough to permit me to report three additional cases of primary sarcoma of the stomach, not as a paper, but as a postlude to the very interesting and instructive study which Dr. Manges has just presented to us. I feel somewhat embarrassed to present these cases to you in this abbreviated and superficial way, for I believe that they and the subject warrant an extended study, but in the few days in which I have had notice of your indulgence I have had time to extract in a very brief way only, the most essential notes on the cases which I hope to discuss more fully at some future time when I shall be better prepared on the subject which Dr. Manges has so opportunely brought to our attention.

¹ Read before the Gastro-Enterological Society, April, 24, 1905.

Case I.—J. M., female, aged fifty-seven years. The patient entered the hospital in a delirious condition, at times she cleared up somewhat, but was not mentally competent at any time. Friends stated that she had been alcoholic since the age of fifty. Previously she had always been in good health until within the past two months, when she commenced to lose strength and appetite. Her only complaint has been of general weakness. Temperature on admission, 99° F., pulse 86, respiration 24.

The physical examination was practically negative, except for the following conditions—pulse, weak, regular, considerable degree of arterial disease and tension.

I saw the woman several times but was never able to make anything definite out of the case, other than general arteriosclerosis and senility. The extreme emaciation and a peculiar brownish pigmentation of the skin, at one time gave rise to a question of Addison's disease and Dr. Lambert, under whose care she was, insisted throughout that the condition was one of new growth cachexia, though careful examination, particularly of the flaccid abdomen gave no hint as to its location.

Milk only was supplied for nourishment, this was retained and apparently fully digested. No gastric tenderness or tumor was present. Whisky and strychnine were administered from time to time, but the weakness and emaciation steadily increased. After she had been in the hospital fourteen days, she vomited one night, four to six ounces of blood-stained material. This was not saved by the nurse. In the morning a small amount of coffee-ground vomitus was also discharged. The patient at this time was seen to be moribund and she died within a few hours.

Abstract of Protocol.—*General appearance*—Emaciated and senile. *Heart*—Brown atrophy; aneurismic dilatation of the sinuses of ascending arch. Marked coronary sclerosis; moderate arteriosclerosis of arch of aorta. *Thyroid*—Left lobe contains an encapsulated mass, thought to be an adenoma. *Lungs*—Chronic miliary tuberculosis of apices. *Lymph nodes*—Large, anthracotic and tuberculous. *Liver*—Fatty degeneration and chronic congestion. *Spleen*—Old-healed infarctions. *Pancreas*—Negative. *Stomach*—There is an hour-glass constriction 5 cm. from pyloric ring. Both the upper and lower curvatures of the stomach show thickening of the walls without definitely circumscribed tumor formation. In places the mucous membrane lies free over the surface of the new growth, but in other places the mucous membrane is sloughing and is replaced by a layer of mingled blood clot and necrotic tumor material. The stomach as a whole is small, and except for the ulcerated areas its mucosa is free and anemic. *Intestine*—The intestine is adherent, in a few places, to the peritoneum and in these areas minute tubercles are found, supposed to be recent tubercles, cor-

responding to these points internally, minute ulcerations of the intestinal mucosa are seen in a few places. These ulcers are thought to be tuberculous. *Adrenals*—Negative. *Kidneys*—Chronic interstitial nephritis. *Genital organs*—Atrophic. *Blood vessels*—The inferior vena cava presents a dilatation filled by recent thrombus located just above the bifurcation. The descending aorta and the large trunks of the abdomen and pelvis show marked arteriosclerosis.

The gross anatomical diagnosis was senility, complicated by gastric carcinoma and adenoma of the thyroid gland with healed pulmonary tuberculosis terminating with thrombosis of the inferior vena cava.

Greatly to my surprise microscopical examination showed that the gastric growth was a small round-cell sarcoma, apparently originating in the stomach wall. The minute nodules found in the peritoneum were also found to be sarcomatous.

Case II.—The case was that of a male, fifty-seven years of age, a baker by occupation. He first came to me complaining of pain just above the umbilicus. His previous and family history were good and gave no hint as to the nature of the present trouble. At times paroxysmal vomiting occurred, usually when the stomach had been overloaded. The vomitus never contained blood.

The man was a large and powerful German, very well nourished. Examination of chest and abdomen gave only negative results, perhaps due to the large amount of abdominal adipose. Hemoglobin, 65 per cent. No hyper-temperature, pulse and respiration normal. He was given a simple rhubarb and soda mixture and was advised as to diet.

Two months later he returned showing marked emaciation, so that palpation of the abdomen was now an easy matter. He still complained of abdominal pain, sometimes very severe and cramp-like in character. He had become very weak; extremely pale and had lost flesh in a truly astonishing manner. He had no desire for food and even fluids were followed by extreme distress.

Palpation of the abdomen disclosed a firm globular mass in the hypochondrium a little to the right of the median line. Inflation of the stomach and auscultatory percussion demonstrated the mass to be apparently attached to the stomach, which was not, however enlarged. Considerable tenderness was present over the mass. Examination of the gastric contents, after a test meal, showed delayed digestion, and apparently more or less pyloric stenosis. Both free hydrochloric acid and lactic acid were found in small amounts. No blood was found and the Boaz-Oppler bacillus was not present. The patient was given a solution of dilute hydrochloric acid and was placed exclusively on a milk-diet. He was seen frequently. Considerable gain of weight and improvement of symptoms was made under this treatment but no decrease in the size of the tumor was observed and he was strongly

advised to submit to an exploratory laparotomy.

This was performed at the Hood Wright Hospital by Dr. Lucius Hotchkiss.

The pyloric extremity of the stomach was found to be involved for a distance of about 10 cm., by an infiltrating growth, subperitoneal, but of such extent, that considering the condition of the patient, it was not thought prudent to attempt enucleation or other operative procedure.

The patient died about ten days after the operation and, as we were unable to obtain an autopsy, the house surgeon, Dr. Hanscome, made a thorough exploration of the abdomen through the operation wound and removed portions of the various viscera for examination.

The growth was found to be both submucous and subserous, infiltrating between the walls of the stomach. Microscopical examination demonstrated it to be an angiosarcoma. No metastases were found in any part of the body, though, as I have stated, a complete autopsy was not performed.

Case III.—R. L., female, about fifty years old. Entered Gouverneur Hospital, July 4, 1904, in the service of Drs. Huddleston and Braunlich. Two years ago she had attacks of flatulence, diagnosed as "catarrh of the stomach." There was pain after eating, sour taste in the mouth and similar symptoms. Eight months ago she began to lose flesh and strength. She had occasional attacks of pain over the epigastrium and vomited once in a while, but she had never ejected material resembling blood. On two occasions she was at Mt. Sinai Hospital where a diagnosis of gastric carcinoma is said to have been made. During this time she twice vomited blood.

The emaciation and asthenia have constantly increased, so that the patient is now bedridden and has developed bed sores. She is extremely anemic, has fever at times and is much troubled with constipation.

Inflation of the stomach demonstrated the lower border to be two fingers breadth above the umbilicus. Although abdominal walls were very thin, owing to the great emaciation; no gastric tumor could be demonstrated and gastric tenderness was doubtful.

The general appearance was that of a woman of medium height, extremely emaciated and of poor muscular development. The skin was very pale and of a waxy appearance. She had an expression of anxiety and suffering and was very apprehensive of being given pain.

Examination of thorax was negative except for marked emaciation. There was slight edema of the left leg, but otherwise the extremities were negative. Examination of the abdomen on many occasions always gave absolutely negative results. Vaginal and rectal examinations were also negative.

Frequent examination of the stomach contents showed the constant presence of free HCl and also of lactic acid. The Boaz-Oppler bacillus was present.

The anemia was profound and the hemoglobin finally sank below 10 per cent., as determined with Dare's instrument; the red-cell count below 1,000,000, and the blood presented the characteristic picture of a very grave secondary anemia. The urine constantly showed the presence of slight traces of albumin and occasionally considerable numbers of casts were found. The weakness, emaciation and anemia constantly progressed in spite of rectal and gastric alimentation and she died, July 16.

A post mortem was absolutely refused and consequently the only possible examination was made per vaginam, but this was done in a quite satisfactory manner, all the thoracic and abdominal viscera being removed and submitted to examination.

The following extracts of the examination touch only on the points of direct interest: "The entire pyloric end of the stomach shows a thickening of the walls, chiefly in the muscular and submucous layers. This thickening is diffuse, not nodular, and is very firm in consistence. The mucosa of the stomach is very anemic and in a few areas minute hemorrhagic extravasations are to be made out. The mucosa moves freely over the submucosa and is apparently not at all involved by the process noted. Although the entire pyloric ring is thickened, it does not amount to a clinical obstruction."

Both gross and microscopical examinations of the other viscera showed only the changes consequent upon severe anemia. The lymph nodes were in particular inspected, but no metastases were found except in certain of the smaller nodes of the gastric mesentery, which showed a few small patches of invasion.

Microscopical study of the growth showed it to be a fibrosarcoma, though in places the diagnosis of myxosarcoma might be granted.

To my mind there is no doubt but that primary sarcoma of the stomach is much more frequent than is generally thought to be the case. Unquestionably this is due to the fact that microscopical examination of tissues removed post mortem is not invariably resorted to. The four recorded by me have been discovered in a series of some 1,200 consecutive autopsies, and in each of these instances the gross specimen aroused my suspicion as to the unusual nature of the growth. It stands to reason that gastric sarcoma may, in many instances, resemble the more common gastric carcinoma, and it is my firm belief, that were every case of stomach neoplasm examined microscopically, we would find sarcomata much more frequent than my statistics indicate.

Judging from my four cases, a very small and insufficient number, it is true, it seems that in several respects, sarcoma of the stomach differs materially from the usual course of gastric cancer.

There is less tendency to involvement of the gastric mucosa and more toward infiltration of

the muscular walls. Metastases seem to be less frequently formed and of later appearance and the course of the disease is longer than usual in carcinoma.

It has seemed to me for some time, after a study of my own cases and of such as I have found in the somewhat meager literature of the subject, that it may be possible to make a differential diagnosis in some cases of gastric growth, between cancer and sarcoma of the stomach. Obviously this can be done in but a small number of cases, but in these it is apparently of considerable importance since the sarcomata seem to present a more hopeful field for surgical intervention than the carcinomata on account of the less tendency to general metastasis and invasion by contact.

I feel certain that in the instances cited above the distinction should have been made in cases II and III particularly, as it was possible to satisfactorily palpate the general abdomen contents in these cases.

The presence of gastric tumor, with both free hydrochloric and lactic acid in the stomach washings, the long course of the disease without discoverable metastasis, with little or no blood in vomitus, even in the later stages of the disease, should, in my opinion, lead at least to the serious consideration of the possibility of gastric sarcoma.

In closing these case reports permit me to say that in my opinion cases of gastric tumor should be submitted to surgical council, even to exploratory laparotomy, just as soon as diagnosis becomes a matter of tolerable certainty.

MEDICAL PROGRESS.

MEDICINE.

Tuberculous Meningitis.—W. F. CHENEY (*Journal A. M. A.*, May 20) reports and comments on three cases of tuberculous meningitis with special reference to the diagnosis. He mentions the indefiniteness of the early symptoms, and says that we should always be suspicious of tuberculous meningitis in a child in illness with associated digestive disturbances, slight fever and irritability of temper. Stupor is more significant, but it may also be due to intestinal toxemia or some acute infection, but in such case there is usually a higher fever. Evidences of intracranial pressure, such as pupillary abnormalities, local paralyses, irregularities, etc., are still more definite indications, but these, like the mental condition, may vary from day to day, thus giving rise to false hopes of recovery. Rigidity of the neck muscles is a very valuable sign, only likely to be simulated by disease of the cervical vertebrae or rheumatic torticollis, and in these other symptoms of meningitis are apt to be wanting. The Kernig sign, so valuable in the adult, is, according to Cheney's experience, difficult to elicit in children, owing to their fear of manipulation. The white blood count is of value, a moderate leucocytosis pointing to tuberculous rather than to other forms. Lumbar puncture furnishes negative evidence of value, with the other symptoms present, a clear fluid, free from microorganisms is characteristic of tuberculous meningitis.

One of his reported cases is of interest on account of its occurrence in an adult, its clinical resemblance to cerebrospinal meningitis, and from its being the only one of the three in which an autopsy was obtained. We are apt to associate tuberculous meningitis with infancy, but it can be excluded at no period of life. In this case the low leucocytosis and the lumbar puncture findings confirmed the diagnosis of tuberculous meningitis during life, and the autopsy revealed a pre-existing lung focus. Tuberculous meningitis is always secondary to the disease somewhere else in the organism. The article concludes with remarks on the differential diagnosis from other conditions, and especially from the other forms of meningitis.

Headache From Malaria.—C. J. STEDMAN (*Journal A. M. A.*, May 27) reports a peculiar case of malaria, without temperature symptoms, occurring in the middle of an Arctic winter. The only symptom—headache—appeared each forenoon and lasted five or six hours. The patient acknowledged no previous malarial infection. The blood examination showed no perfect organisms, but numerous malarial spores, and these rapidly disappeared, with the symptoms, under quinin. He regrets that the blood examination was not made earlier and the exact character of the parasite determined, though the appearances indicated the tertian organism. The case is reported on account of the unusual circumstances and manifestations, and as a suggestion of the importance of early blood examination.

Economics of Medical Organization.—J. MADISON TAYLOR (*Journal A. M. A.*, May 27) deprecates the lack of professional and scientific cooperation in the medical profession. There should be more frank and full discussions and interchange of opinion; more professional consultations between general practitioners, and more interest and activity in local medical organizations. "If we show that we have confidence in each other the general public will have more confidence in us." He suggests the clubbing together of physicians of moderate means in the purchase of professional works and subscription to medical periodicals, thus multiplying their resources for professional information at slight individual cost, and the more freely availing themselves of each other's professional knowledge and skill in the common exigencies of general practice. Lastly, he speaks of the need of more influence of the profession in public matters and in legislation, which can only be remedied by better organization and more active work on our part. "If," he says, "each reputable physician in America were a member of the American Medical Association, and fulfilled his duty in local and centralized organizations, not only would the power of medical opinion become invincible, but individual self-respect would reach a high plane. Not only so, but individual values being thus raised, proportionate earnings would follow. The public is perfectly willing to pay well for value received, and would quickly become content to pay more for better service, not only in times of exigency for personal attention, but for the knowledge that through and by intelligent watchfulness of local and national interests they would be better served, better protected, and that future needs would be anticipated and met."

Action of Roentgen Rays on Leucemia.—The beneficial action of the Roentgen rays on leucemia, reported from so many clinics, could also be observed by F. LOMMEL (*Munch. med. Woch.*, May 9, 1905).

In one case the leucocytes dropped from half a million to normal in three months, and the myelocytes disappeared altogether. The spleen was no longer palpable at the end of treatment, and the patient lost his anemia and could do light work without fatigue. It seems, however, as if the cure is not permanent, for when the patient was seen again after several months, his blood contained over 50,000 leucocytes. The first sign of recurrence is the appearance of myelocytes in the blood. Good results were also seen in Hodgkin's disease, but the patient died of some other affection, so that it was impossible to say if the cure was permanent.

Appendicitis Work;—Different Views.—R. T. MORRIS (*Med. Rec.*, May 27, 1905) says that although formerly he used to forbid morphine altogether his views on the subject have changed and he now gives it cautiously in cases in which there is great restlessness. The drug is still regarded as a double-edged sword; however. Both gauze packing and iodoform gauze have been abandoned altogether, as well as the use of buried sutures of silkworm gut. A standard length of one and one-half inches for the incision has been adopted for nearly all instances, including cases of abscess and peritonitis, and it has been found safer to deal with adhesions by touch than by sight. The time limit has also been greatly reduced, and now it is common to have the time from the first incision to the last suture occupy not more than seven to eight minutes. All patients are operated, even if moribund, a preliminary infusion of salt solution being given; adhesions are freely separated if necessary but not otherwise, and the idea of flushing out the abdomen has been dropped. After eliminating the features which seemed to have a special death-rate of their own, viz., gauze packing, iodoform gauze, long incisions, and the expenditure of time in unnecessary detail of work, one hundred consecutive operations were published with a two per cent. death-rate. The author does not favor the removal of the normal appendix in the course of other operative work, and he now uses a cigarette drain in all cases in which pus or septic debris have been left in the peritoneal cavity. The dictum of operating as soon as the diagnosis is made holds good, with certain exceptions, but it is still a question what to do with patients who are convalescing from the attack. In interval cases it now seems best to operate only when on palpation the appendix is found to be the definite seat of chronic infection or of adhesions which cause symptoms.

Ailurophobia and the Power to Be Conscious of the Cat as Near, When Unseen and Unheard.—S. WEIR MITCHELL (*Am. Med.*, May 27, 1905) says sufferers from cats may be classified as follows. (1) Asthmatics—cat asthma. (2) Cat fear, with or without sequent excessive, emotional manifestations, and only on sight. (3) Cat fear. Power to be sure an unseen cat is near. Symptoms same as in Class 2, and apt to be extreme. (4) Those of the last class can detect the cat by smell, or may sometimes and not always. (5) Cases occur in which the consciousness of a cat as present through its smell once existed, but does not now, and yet the ability to detect unseen cats remains. (6) It is therefore likely that the cat emanations may affect the nervous system through the nasal membrane, although unrecognized as odors. Many of the victims declare even strange cats seem to have an unusual desire to be near them, jump on their laps and follow them.

Review of the Tuberculosis Problem.—In a review of this subject Dr L. ROCHESTER (*Buffalo Med. Jour.*, June, 1905) considers that the following pre-

cautions should be adopted by those suffering with tuberculosis of the lungs: (1) The consumptive should kiss no one; and no one should kiss the consumptive on the mouth; (2) the consumptive should never lend his handkerchief to anyone or borrow a handkerchief from anyone; (3) the eating and drinking utensils of a consumptive should be thoroughly boiled after he has used them; (4) during the act of coughing he should hold a piece of cheesecloth before his mouth, which may be burned or boiled afterward; (5) gauze or cheesecloth should be used to collect the sputa, and afterward burned or boiled, and (6) the sheets, pillow cases, night-clothes and underclothing of consumptives should be boiled for half an hour before washed. The author advocates the establishment in every community of two sanatoria, one for advanced and one for incipient, cases of pulmonary tuberculosis. By the enactment of an ordinance, every person with pulmonary tuberculosis who cannot receive proper care and be accommodated with any room at home to be occupied by himself alone, should be compelled to go to one or the other sanitariums. Two sanitariums are advocated: (1) because the treatment of the two classes of patients is decidedly different; (2) because the constant presence of advanced patients and the occasional painful death of one or more have a decidedly depressing influence upon those having incipient disease. If every case of pulmonary tuberculosis were reported to the health department, the department could send an inspector and determine whether such case is one for home or sanitarium treatment. Instruction in regard to destruction of sputum and feces, in regard to precaution as to personal contact with others and in regard to disinfection of apartments lately occupied by the tuberculous, are all of value in checking the spread of the disease; but it is the opinion of the author that if a plan of compulsory reporting of cases and compulsory removal of suitable cases to their proper sanatoria will be much more efficacious than all the other procedures in ridding us of the Great White Plague.

Origin of Aromatic Bodies in the Urine.—The general opinion to-day is that most of the aromatic bodies commonly encountered in the urine (indican, skatol and phenol) are a result of bacterial decomposition in the intestines, and many authors go so far as to say that without the latter there can be no indicanuria. It is therefore interesting to note that K. LEWIN (*Wien. klin. therap. Woch.*, May 21, 1905) has succeeded in obtaining phenol by the autodigestion of tissues in vitro, where bacterial activity could be absolutely excluded. If rabbits are poisoned with large doses of phloridzin, so that an active breaking down of proteid tissue is brought about, enormous amounts of phenol and indican will appear in the urine. The urine of patients suffering from carcinoma will often show an excess of indican, but only if cachexia has been present. The indican here is very obviously derived from the decomposed proteid tissue and not from bacterial activity.

SURGERY.

Acute Pancreatitis.—A contribution to this important subject is furnished by NOWZ (*Archiv f. klin. Chir.*, Vol. 75, No. 3), who reports two cases cured by operation. In one the diagnosis of a perforating gastric ulcer had been made, in the other nothing definite could be made out. In the first case there was no fat necrosis, but on going through the lesser omentum, a dark red, swollen mass could be made out, dating apparently from the pancreas. There was a good deal of fluid present. In the other case

a sloughing mass was found at the site of the pancreas, which was removed. Both of the cases were tamponed and made a very favorable recovery. From a study of published cases, the author believes that the approach through the lesser omentum is the most satisfactory.

Comparative Surgery.—HARVEY CUSHING (*Bull. Johns Hopk. Hosp.*, May, 1905) outlines the plan which has been in use at the Johns Hopkins Medical School, of the development of the plan of teaching operative surgery, which is a distinct departure from the time-worn, yet excellent methods of conducting an operative course, which for the past generation has been widely adopted and generally regarded as most practicable by the surgical teachers in the leading medical institutions. This plan consists in endeavoring to emphasize and drill into the students the following points: (1) Surgical cleanliness, which must be learned early and become a successful operator's second nature, and which is necessarily disregarded in the methods used in teaching operative surgery in the dissection room; (2) the ability to dissect living tissues without so damaging them as to prevent perfect reactionless healing; (3) an acquirement of skill in the proper control of hemorrhage, and (4) particular technic of visceral surgery, whether abdominal, thoracic or intracranial. To properly emphasize these points the course has been started upon living animals, on which all the formalities that would be observed in regard to a patient admitted for treatment to the surgical wards of the hospital have been followed. Clinical histories have been kept on regular hospital history sheets; the effect of anesthesia on the pulse and respiration has been carefully recorded; the detail of the operative preparation both for the staff and patient has been followed; pathological and postoperative notes have been made, and in case of a fatality a formal autopsy performed, and its results added to the record. The author considers that after a training of this sort, and with an acquirement of proper surgical reflexes, a student, when his turn comes, should be found a safe and valuable helper in the hospital operating room, where blunders in technic must not occur; and, furthermore, he may with profit to himself be an understanding onlooker at the surgical work of others.

A Case of Repeated Acute Intestinal Obstruction Following Ovariectomy.—E. D. TELFORD (*Med. Chronicle*, May, 1905) in reporting a case, calls attention to the fact that the occurrence of acute intestinal obstruction after the older operations of ovariectomy and hysterectomy appears to have been not uncommon. The modern use of peritoneal flaps in covering in raw surfaces and stumps has very materially diminished this risk, yet there always remain cases in which the possibility of subsequent intestinal obstruction constitutes a very real danger. This danger is especially marked in those cases in which extensive intestinal adhesions are separated in the removal of ovarian tumors or in the extirpation of matted tubes and ovaries. In such cases areas of bowel may be left in a raw, denuded condition, and such surfaces readily form adhesion liable to set up serious obstructive mischief at a later date.

Anatomical Points in Prostatectomy.—It was J. W. S. Gouley, of New York, who, together with Bottini, of Italy, between 1865 and 1886 kept alive the operation of prostatectomy. It had been devised by the French surgeon, Mercier, and for the first ten years or so after his retirement from active work, it was Gouley who actually stood alone in the practice of

prostatectomy. FRANCIS S. WATSON (*Annals of Surgery*, April, 1905) describes Gouley's operation as that of rapid fingering creation to the size of the prostatic urethra by the forefinger. The author states it to be identical with the operation employed by Goodfellow, of San Francisco, who not knowing Gouley's description, assumes it to be original with himself. One of the most important anatomical points in connection with rendering possible the digital enucleation of the prostate, is that the three so-called lobes are definitely separable from the fibrous sheath enclosing them. The thickness of this is in some cases most conspicuous. There is a well-marked interval or space between the surface of the gland and the inner aspect of the outer sheet. It is in this space that all enucleation of the gland should be conducted. The level of the lower border of the urethral aspect of each lateral lobe is a little above that of the floor of the prostatic urethra, also above the level of the ejaculatory ducts. The operation, therefore, which does not involve injury of the floor of the prostatic urethra, will not injure the ducts. Thus enucleation without injury to the ducts is theoretically at least possible. This is a contravention of Dr. Young's holdings, who claims that the digital enucleation of the gland is a proceeding which takes place in the dark and which must be injurious to the ducts. The author emphasizes the fact that it is not so much a matter of technic, but rather is it important that those who are experts in this special province, should teach the profession at large that the operative treatment of prostatic hypertrophy has been sufficiently perfected to make it desirable that patients should be given the benefit of it rather than be submitted to the dangers of catheterism until surgical intervention is practically hopeless. The credit of devising suprapubic prostatectomy belongs to Belfield and McGill as certainly as it does not belong to Freyer. To him, however, is definitely due the awakening of great interest in the subject of prostatectomy in England, where, as is well known, the perineal route has never been seriously considered by surgeons. The article illustrated by photographs of the author's recent specimens, some of which show very clearly that the ejaculatory ducts may be saved even when the gland is removed by finger enucleation through the median perineal incision. In conclusion Watson states that the mortality of the perineal operation is much less than that of the suprapubic, that at least two out of three times the gland is to be found removable via the perineum and that in the other third the surgeon may proceed to do the suprapubic operation. After seven years of attention to the subject of prostatectomy, Watson concludes that he would suggest that the most valuable contribution at present possible on this subject would be to have reported cases treated by the catheter throughout with special reference to mortality and the time which elapsed between the commencement of catheter treatment and death.

Morphine-Scopolamine Narcosis.—The general opinion in Germany is voiced by M. KOCHMANN (*Münch. med. Woch.*, April 25, 1905), when he states that morphine and scopolamine alone as narcotic, is hardly ever safe since the dose of the former drug is too high. Small doses are, however, highly to be recommended if followed by one of the usual anesthetics (morphine hydrochlorate 0.01 to 0.02 gme., scopolamine hydrobromate 0.5 to 1.0 milligme. in fresh solution). Either chloroform or ether may be used but with either the advantages are perhaps more marked. The excitation stage is shorter, less anesthetic is necessary, salivation is never troublesome and the danger of post-

operative pneumonia is considerably diminished. Some 1,200 cases have been reported with a mortality of one per cent., but many of the patients were already in a moribund condition when operated on. It may also be advisable to resort to the two drugs in smaller doses in Schleich's infiltration anesthesia.

Value of Functional Renal Diagnosis.—The general opinion concerning the value of the various methods employed for determining the functional activity of the kidneys has undergone considerable modification of late. Ureteral catheterization is employed quite generally in preference to the different segregators, despite the fact that Luys has recently described a new instrument which it said to be superior to anything previously offered. A perusal of the book written by Luys convinced G. KAP-SAMMER (*Munch. med. Woch.*, April 25, 1905) that the disadvantages of segregators in general also apply here. It is particularly the fact that the urine is not collected directly from the ureters but is permitted to mix with the secretions of the bladder, which introduces a serious source of error. There can be no doubt at the present day that the only safe and reliable method of obtaining the urine from the two kidneys is by means of ureteral catheterization. Cryoscopy is no longer considered so infallible a method as it was years ago. Koranyi himself laid down definite rules but later investigations have shown that the freezing-point of the urine may vary within very wide limits both in health and in disease. The freezing-point itself is of little value since this may be modified considerably by the amount of water ingested. It is more important to estimate the freezing point of the urine first under ordinary conditions and then to give the patient a large amount of water to drink; with normal kidneys the urine will be more dilute, while in parenchymatous nephritis the concentration need not be altered. To determine this, it is not necessary to resort to cryoscopy, for the specific gravity will tell as much. Another fact which must not be forgotten is that the simple insertion of a catheter into a ureter may set up a reflex polyuria which will considerably alter the freezing-point even though the kidney of that side is in every way normal. The freezing-point of the blood is equally as unreliable. Two years ago, Kümmel stated that 0.58° to 0.60° pointed to bilateral disease, hence contraindicated nephrectomy, while 0.56° excluded absolutely bilateral disease. Recently, a large number of cases have been reported where both kidneys were normal or only one was affected, with a freezing-point of 0.60° to 0.69° . Similarly, there are instances where both kidneys were much diseased with normal freezing-point. In anemia and cachexia, low figures are the rule and if the kidneys should become insufficient, it is quite possible for the blood to freeze at the normal point. It is therefore safe to say that cryoscopy can be altogether dispensed with. Two dyes have been employed subcutaneously and their excretion studied by means of cystoscopy. Of these, methylene blue is extremely unreliable, while indigo-carmin is a decided improvement. Its chief use is to determine the site of the ureteral orifices in difficult cases; it will never, however, replace catheterization. Finally, phlorizin has been recommended, since a diseased kidney is not supposed to discharge sugar after injection of 0.01 gme. It seems, however, that the excretion of phlorizin sugar takes place chiefly in the glomeruli so that it is quite possible to get a saccharine urine where the nephritis affects principally the convoluted tubules. Another source of error arises if the catheter incites a reflex polyuria; the urine from the healthy side may then contain less sugar than that from the diseased side. The total amount of sugar excreted

from each side cannot always be determined, hence it is best to place sole reliance upon the time which elapses before the first trace of sugar appears. Normally, this occurs in twelve to fifteen minutes; twenty to thirty minutes signify a repairable disturbance and later than thirty minutes, complete loss of function which would contraindicate nephrectomy. The appearance of sugar in twelve to fifteen minutes will prove that the kidney is perfectly healthy, provided that albumin and casts are not present in the urine. In the latter case a tubular nephritis may yet be present. There are a few cases on record where even these conservative rules have misled. The author finally concludes that only the indigo-carmin and the phlorizin tests possess some value in determining the functional activity of the kidneys.

THERAPEUTICS.

The Therapeutic Art.—O. T. OSBORNE (*Journal A. M. A.*, May 13) remarks on the deficiencies of textbooks and of the ordinary methods of teaching therapeutics and the embarrassments of the newly fledged physician in adapting his treatment to his case, and points out what seems to him the remedy. He would have laboratory pharmacology taught by a purely scientific man and the therapeutic application by a purely practical man, but would have the two courses so interwoven as to constitute one department. He lays down a program of the course of teaching, which can, of course, be improved on, he says, as the plant grows. Early in the second year he would begin with a practical experimental course in the pharmacologic laboratory, following this in succession with laboratory courses on toxicology and pharmacy. After this comes the introduction to materia medica and prescription writing, the size of doses, the recognition of crude drugs, etc. At the end of the year a written examination on all the subjects covered in the previous studies is required. During the summer vacation he would have the student spend fifty hours in the prescription department of some drug store, thus beginning a practical acquaintance with these tools of his profession. At the beginning of the third year the physiologic action of drugs is taken up and the last third of the year is devoted to lectures on appliances, applications, hydrotherapy, climatology, electricity, organic extracts, etc., and blackboard work on prescription writing and criticizing is continued daily throughout the year. Toward the end of the year lectures are given on the history of medicine with special reference to the advances in scientific therapy. In the fourth year the study of therapeutics is continued by lectures on the management of the various diseases, how to treat them with reference to the physiologic, pathologic, etiologic, symptomatologic and other considerations involved, selection and administration of drugs, etc. Throughout this senior year two clinical lectures are given each week, and the senior students act as clinical assistants in the dispensary, taking histories and writing prescriptions under dictation. At the end of this course, after passing a written examination, the graduate, Dr. Osborne remarks, ought to know something of this subject.

Treatment of Hay-Fever.—A. DENKER (*Munch. med. Woch.*, May 9, 1905) has had no success with the antitoxin treatment of hay-fever, but recommends nasal massage. The mucous membrane of the nose is thoroughly anesthetized with cocaine and adrenalin, then gentle massage is begun at the inferior turbinated bone with a cotton-carrier, dipped in a 10 per cent. solution of euphrophen in oil. After the lateral portions of the nose have all been treated, the massage is continued downward along the septum. The procedure should

take two to three minutes at first, later, when the mucous membrane has become less irritable, three to four minutes. The effect is marked and lasting, and in several cases there was no return of the affection during the second year.

Albumin Digestion in the Stomach.—In the hopes of obtaining some idea of the actual digestive powers of the stomach, E. ROSENBERG (*Zeitsch. f. klin. Med.*, Vol. 56, Nos. 5 and 6) gave test-meals of plasmon to a large number of patients and then analyzed the various proteids found in the expression after forty-five minutes. The degree of peptonization varied within very wide limits, thus in one case of simple, uncomplicated subacidity, 61 per cent. of the plasmon was dissolved, while the lowest figure—13 per cent.—was found in an acrid gastritis. It is impossible to lay down definite rules for the different pathological conditions of the stomach except in atony and ecstasy, where the average is quite constantly 26 per cent. and in hyperacidity, where about 18 per cent. is the rule. It seems strange that peptonization should be so slight in hyperacidity and often relatively good (55 per cent.) in such serious disturbances as carcinoma. The method therefore has no more practical value than the tryptophan reaction, which was also found positive in many different conditions, and often negative in carcinoma.

The Therapeutic Use of the X-rays.—First referring to his earlier articles on the subject, W. A. PUSEY (*Journal A. M. A.*, May 13) the results of his later experience with the X-ray. In some disorders, such as hypertrichosis and lupus erythematosus, the results have not equaled expectations; in some others, such as tuberculous glands and joints and deep sinuses, the results have been variable, though with some marked successes. The value of the X-rays has been most markedly demonstrated in syphilis, tinea, acne, rosacea, lupus vulgaris, blastomycosis, cutaneous carcinomata and senile keratoses. The value of the X-rays has also been shown in hyperidrosis, inflammatory dermatoses, pruritus, nevi, keloid, sarcoma and as a prophylactic after operation for malignant disease. In some other conditions, abdominal tuberculosis, acinomyosis, mixed tumors of the parotid, there has been apparent benefit from the X-rays, but Pusey does not feel inclined, from his experience, to make any very positive generalizations. In the deeper situated cancers, as might be expected, the treatment is less hopeful, though palliation may be hoped for and some surprisingly good results are reported. In conclusion, Dr. Pusey gives his latest experience with pseudoleucemia, leucemia and goiter. In the former he has repeatedly seen clearing up of the glands, but in the only case he has been able to follow up there have been repeated recurrences. In true leucemia he has seen like good effects as regards disappearance of the enlarged glands, but generally without any corresponding improvement in the condition of the blood. One remarkably successful apparent cure is reported, the blood examination revealing normal conditions and the patient apparently well. In some small parenchymatous goiters he has seen reduction in size of the tumor, but in most of his cases no benefit was observed.

Relation of School Methods to School Diseases.—W. J. HERDMAN and J. H. McBRIDE reported for the committee appointed at the New Orleans session of the American Medical Association (*Journal A. M. A.*, April 15). They gave an account of what has been done here and abroad in the way of school inspection and isolation of diseased children and general sanitation of school buildings, the special care of backward children, etc. They find the work satisfactorily done in a few places, though as yet inspection methods are far from

complete in most communities, and in some they have never been tried. The report recommends that the American Medical Association put itself on record as urging complete and systematic medical inspection of schools and school children: "1. In the interests of the public, since it is a potent means for detecting and preventing the spread of contagious and infectious diseases; 2, for the purpose of securing to the child, while in attendance on school, the most favorable hygienic and sanitary conditions; 3, for the purpose of securing exact knowledge regarding the physical and mental capacities of each child, in order that the methods of instruction may be intelligently directed to meet individual needs."

PRESCRIPTION HINTS.

Ointment for Burns.—In his practice Professor Reclus, of Paris, France, employs for wounds of all kinds and burns a salve which combines a threefold action—antiseptic, analgesic, and hemostatic. This ointment is based on the principle that wounds, burns, or ulcerations of every kind can be painful, can bleed, and can become infected. An application in order to be of service should combat all these complications. His idea was consequently to combine, in the same vehicle, vaselin, antiseptic, analgesic, and hemostatic substances. The following preparation may be used in every case when the skin is broken, either from wounds, sores, ulcers, burns, etc. It is especially useful in the extensive wounds observed in crushed limbs.

R Antipyrin	5i
Boric acid	} aa 3½
Salol	
Iodoform	} aa gr. xv
Phenic acid	
Corrosive sublimate	gr. ii
Vaselin	5vii

M. After washing the raw surface with hot water (130° F.), to remove all foreign bodies and destroy the microbes, the parts are sprayed with peroxide of hydrogen and the ointment is applied to all the surface on antiseptic gauze and the parts put up in absorbent cotton. The ointment, on account of the iodoform, might inconvenience some patients by its penetrating odor; in that case iodol may be substituted. Where large ulcerations are to be treated or extensive burns, the amount of vaselin might be increased two or threefold, but the doses of the active substances should remain the same.

For Leucorrhœa.—If the discharge is watery the following formula will supply a valuable suppository for leucorrhœa:

R Hydrastininæ hydrochloratis	gr. xii
Zinci boratis	gr. xii
Extracti belladonnæ	gr. iii
Boroglycerini	3iv

M. Fiant suppositoria No. xii.

Sig. Introduce suppository into vagina at bedtime, after using a cleansing douche.

Enteralgia.—

R Spiritus ammoniæ aromatici	5i
Spiritus chloroformi	5i
Spiritus camphoræ	5ii
Tincturæ hyoscyami	5iv
Extracti cannabis Indicæ fluidi	5i
Tincturæ cardamomi compositæ	q.s. ad. 5vi

M. Sig. Two teaspoonfuls in water every hour or two until pain is relieved.

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SATURDAY, JULY 15, 1905.

AMERICAN MEDICAL ASSOCIATION AT PORTLAND.

IN spite of the distance from the center of population there has been a notable gathering of the members of the medical profession of this country at Portland during the past week. Nearly two thousand members of the Association registered and there were many more non-members present at this session than usual. This year's meeting will help in an important degree in extending the influence of the national body. Not only did physicians all over the country take advantage of this opportunity of being present at the exposition of the nation's medical work, but nearly every member of the Association brought with him his wife or sister or child, to enjoy a visit to the Pacific Coast and the Northwest. The trips before and after the meeting to Yellowstone Park, to the Yosemite, to Canada and to Alaska, as well as the Lewis and Clark Exposition in Portland, formed an irresistible combination which perfect weather made possible for all to enjoy. This proverbially charming summer weather of Oregon had been overdoing itself, for the week before the meeting had been a record breaker in temperature in Oregon. So much so that in Portland the iron drawbridges "froze" tight from the heat—proper al-

lowance not having been made for expansion resulting from such unusual heat—and it was only after the fire-boats had cooled the iron girders that the draws could be moved. But by the time the bridge opened and the hot wave had reached the Eastern States, Portland weather was itself again, with clear blue skies, Pacific breezes and cool nights.

The Lewis and Clark Exposition, with its natural vistas of water and woodland and its wealth of surrounding blossoms, is perhaps more satisfactory than any of the preceding national expositions, in that it is small and thoroughly artistic, and that it represents the idea of progress rather than competition. It shows the great resources and industries of the West in a way that is more stimulating to the mind of scientific bent than other more commercial expositions. The buildings of the Exposition, as well as many of the houses of Portland, were thrown open to the members of the Association and their friends, for fêtes and receptions, and after the business of the meeting was finished the Association and its friends devoted the whole of Friday to a trip on the Columbia River with its panorama of white-capped mountains and an elucidation of salmon fisheries as a diversion. Under these circumstances it is not surprising that the social features of this year's meeting of the American Medical Association are sure to leave pleasant memories for many years to come for all those who were in attendance. Western hospitality proves its right to a place in tradition beside that of the South, and will not soon be forgotten by those who had the privilege of enjoying it.

The scientific side of the meeting was fully up to the standard of the Association's annual sessions, and was, if anything, more practical and helpfully suggestive than usual. The symposium on nephritis on Wednesday morning and that on the stomach on Thursday morning summarized succinctly recent progress as regards the diagnosis and treatment of the diseases of these most important organs. There was not a single paper contributed to these discussions that could be considered in any sense the conventional review of well-known details that such papers sometimes prove to be. Each represented an interesting phase of recent experience and study, presented by an investigator keenly alive to the advance of medicine along this particular line.

The readers of the MEDICAL NEWS when they see the society proceedings during the next few

weeks will, we feel, be as much impressed as those who were present with the fact that the discussions in the symposiums were as thoroughly scientific as those in the best European medical societies, and that they indicated a striving for ideals which will undoubtedly raise the standard of medical society work. The review of recent progress in our knowledge of nephritis proved especially interesting and timely. There was a radical departure from some of the old lines of thought and long accepted notions. It is now acknowledged that albumin and casts may both be present in the urine under certain circumstances without necessarily signifying the existence of nephritis. On the other hand nephritis of marked degree may exist without either albumin or casts being present in the urine at certain times and even for prolonged periods. Urinary examinations alone do not suffice for the diagnosis of Bright's disease, but the complete round of the patient's symptoms must be taken into consideration. When the heart fails, then it is that the kidney lesion becomes most significant and tends to presage a fatal termination. At all times the heart and arteries are most important factors, and interstitial nephritis is a local manifestation of arteriosclerosis rather than an example of true nephritis.

It was curious to note that in spite of all the detailed pathological work that has been done on kidneys during the last quarter of a century, the classification of kidney disease oftenest referred to in this symposium was that oldest of all, the large white kidney and the small and the large red kidney. The best authorities are agreed that the distinctions between kidney conditions must be made on the basis of clinical rather than pathological knowledge, and that only when our acquaintance with etiology advances much farther than at present can a definite classification be made.

With reference to treatment, two different elements were considered most important. In chronic nephritis the patient's nutrition must be maintained and too much liquid must not be advised, as this only overworks the heart without compensating advantage. In acute nephritis, starvation is the indication, as it gives the kidney as nearly a complete rest as possible; in the acute exacerbations of chronic nephritis the same rule must hold as far as the patient's strength will permit. Here great care is required. Undoubtedly more harm than good has

been done in the past by too great a limitation of the diet.

The emaciation so commonly seen in nephritis is more often the result of too strict diet than effect of the kidney lesion. It was emphasized that the dietetic distinction between red and white meats usually made has no justification in their respective effects, and that the maxim of exclusive milk diet for kidney disease has done more to lower resistive vitality than to save the kidney from irritation.

In the Section on Surgery and Anatomy the series of contributions on ulcer of the stomach and duodenum, practically constituting a symposium, made it clear that the same enterprising American surgical efforts that have in recent years served to save so many lives of sufferers from appendicitis and cholelithiasis are now to prevent the serious, sometimes even fatal, complications of gastric and duodenal ulcer and at the same time forestall the development of malignant disease which so often proves the terminal stage of these disorders. Furthermore, the surgical contributions to this session on cancer have a more hopeful aspect than has been the case in recent years. Forty per cent. of patients operated upon for cancer of the breast by the radical method were reported as alive after the three-year limit, and the immunity to recurrences has increased in exact proportion to the amount of tissue removed at the primary operation. Gallstone surgery received the usual attention that it has claimed in recent years, and the evidence of progress is clear here as elsewhere. Refinements in the clinic were especially dwelt upon.

The subject of the occurrence of parasites in various parts of the United States and its recently acquired tropical possessions furnished material of special attention. The review of recent work on amebic dysentery accomplished in the Philippines shows that this disease is at last yielding the solution of many of its complex problems to American industry and genius for investigation.

Dr. Cabot paid a well-deserved tribute in the medical section to the work of American physicians that in Cuba has freed the island from the scourge of yellow fever so long epidemic, and in Porto Rico is gradually freeing, though with quite as assured effectiveness, the inhabitants of the island from uncinariasis, the cause of the anemia, which has proved such a drawback to progress.

Too much praise cannot be accorded to the workers of the marine hospital service, to the

military surgeons, and, above all, to the private investigators who have helped in the brilliant results. It has sometimes been said slurringly by our European colleagues that little that was original came from America, but these last few years show that with due opportunities and incentive for original investigation the talent is not only not lacking, but exists in a very remarkable degree.

From many sections there came, with abundant evidence of intense feeling, a cry for the reform of the patent medicine evil. It was no thoughtless bickering, but a moderate, strong, and healthy demand that the unbearable conditions as they are now found in the United States be modified. And there is good prospect that the hopes expressed will be realized, for in the frank realization that we as physicians are largely responsible for the situation lies a way out of the difficulty. Modern pharmaceutical quackery is born of modern therapeutic nihilism. Many of our leaders in therapeutics, imbued with exclusive laboratory ideals, have left their students to stumble in the darkest ignorance of their *materia medica*. We may honor the teachers' convictions regarding the worthlessness of much that has been passed down to us from Dioscorides to the modern herb doctor, but to ignore totally the teachings of *materia medica*, of prescription writing and of simple compounding has been to send forth a generation of physicians who must needs permit the pharmaceutical houses to do their thinking for them. The recognition of our shortcomings in this branch of medicine happily opens the door that may release us from an intolerable situation.

The House of Delegates conducted an immense amount of practicable business. It has proved its value as a legislative body, and the former tedious modes of transacting the business of the Association fortunately are relegated to the past. One important step in the direction of the organization of the profession throughout the country was taken when the trustees were empowered to proceed with the compilation of a medical directory of all the States of the Union.

A very interesting difference in the present meeting from all recent ones was the interest in the Sections of General Medicine and Surgery, and the comparative neglect of other sections. Many of the specialists whose faces are familiar at meetings of the Association were missed, but, on the other hand, the rank and file of the general

medical practitioners of the Middle and Pacific West were better represented than ever before. Though the medical and surgical sections met in large rooms, it was impossible to seat all who came, and many stood throughout the sessions. There has probably never been so much interest displayed in the proceedings of the sections as at the present session. The interest was of the active kind that constantly catches points made, and the sessions became postgraduate teaching of the most valuable variety. It is evident that the recent meeting of the American Medical Association will long be remembered by many who have not had for years the chance to be in touch with it.

COMPLETE MEDICAL RECONCILIATION.

At the last meeting of the Erie County Medical Society of New York State, Dr. Henry R. Hopkins, as chairman of the Legislative Committee of the Society, offered a resolution to the effect that "this organization authorize its legislative committee to prepare a bill for the purpose of improving our system of State medical examinations by creating a single medical examining board of such number of members so selected as shall be determined by the various representatives of the medical profession and instruct its committee to invite conferences with other societies, State and County, to the end that the proposed bill may meet the views and have the support of the medical profession of the State of New York." This resolution was unanimously adopted. If it could be made effective, it would at once do away, let us hope forever, with all the differing schools of practice of medicine in New York State and there would no longer be homeopath nor regular, nor eclectic, but only physicians licensed to practice in New York State.

This resolution came as a result of the discussion in the Erie County Medical Society of the extremely narrow margin (only one vote) by which the bill granting to osteopaths a medical examining board of their own and all the rights to practice medicine that would accrue to applicants from the obtaining of a license from this board. Under the present system of division of the different schools of practice as pointed out by Dr. Hopkins, the medical profession is placed in a very unfavorable position for preventing the passage of laws that might create further medical examining boards. It is true that what the osteopaths ask is to have a board all their

own so as to secure their license on the easiest possible terms, while the other schools have only the permission to select a special examination in therapeutics, but must pass in all other departments. Unless a distinct modification shall somehow be secured in the present medical status of legal qualification in New York, there is no doubt that each year the battle in the legislature against osteopathy will have to be fought over again and there is a haunting premonition that some time or other—such are the alluring ways of the osteopaths with our legislators—the necessary number of votes will be obtained and a great wrong perpetrated upon the people of this State, a wrong which it will be practically impossible ever entirely to correct.

The question occurs then: Is it possible to make the modification in the present laws suggested by Dr. Hopkins' resolution and unanimously approved by the Erie County Medical Society? In this matter it must not be forgotten that Dr. Hopkins himself is a man of large experience and thoroughly conservative judgment with regard to legislative matters and the general interests of the profession in this State. The Erie County Medical Society, practically the Medical Society of the City of Buffalo, is not apt to give its unanimous approval to a resolution that would be either impossible to fulfillment or be likely in any way to oppose the best interests of the medical profession of New York State. It is clear then that the subject may be considered one, not only open for discussion, but really demanding professional consideration at the present time.

The MEDICAL NEWS has more than once voiced the growing sentiment that there is at the present moment much less of real difference of opinion between the different schools of the practice of medicine than is usually thought by those not familiar with the trend of thought outside of their own special medical interests. It is with regard to therapeutics that the only differences remain. There is a general agreement of minds at the present time that this is where all the schools of medicine are weakest. Recent improvements in specific therapeutics, such as the use of the various antitoxins that have a recognized curative value, are accepted by all the schools. There seems to be ample room for the thought that there might well be a still nearer approximation and that even in the department of therapeutics the State Medical Examiners could so arrange questions that no one of the

three schools of medicine would feel aggrieved because of any neglect of what is true in their special system or because of any demand beyond what their students should be expected to know.

This amelioration of present conditions could come nowhere more appropriately than in New York State. It was in this State that first of all, in order to secure the passage of a law regulating the practice of medicine, physicians of the regular school consented to lay aside some of their prejudices and work in harmony with professional brethren of the other schools in order to secure the requisite legislation. Following their example, other States did the same thing, and as a consequence, most of them now have laws for the regulation of medical practice which would not have been passed for many years perhaps except for this example of yielding somewhat in order to secure a noteworthy benefit. This movement for reconciliation could not come more opportunely than at the present time, since there is little doubt that this year is to see the reunion of the divided medical organizations of the regular school in this State. Next year will be celebrated the centenary of the passage of the first law regulating the practice of medicine in the State of New York. It would indeed be a very worthy feature of that celebration if there should be proclaimed an obliteration of the party lines in therapeutics that have been holding members of the medical profession apart. This second example on the part of New York State would be followed even more rapidly by other States to the great benefit of medical practice and professional life throughout the country.

All of this can be accomplished without any yielding of principle, but only by a rational accommodation of opinions. As we have said, the material difference is in the matter of the use of drugs, and here it is that all the schools are weakest and are ready to confess more and more as time goes on that their knowledge is obscured by ignorance and by too confident trusting in experiences made under circumstances that often suggested conclusions without really demonstrating them. The Erie County Medical Society has our heartiest congratulations in the movement it has so opportunely initiated, and we ask for it the cooperation of other county medical societies throughout the State and eventually of the State medical organizations—regular, homeopathic and eclectic. Here is a work worthy of the best efforts of a distinguished liberal profession.

ECHOES AND NEWS.

NEW YORK.

Hospitals Crowded.—During the hot days of the past week nurses and physicians at Bellevue, Gouverneur, Roosevelt, and, indeed, all of the great hospitals, were overcrowded caring for the heat cases. Patients were sent home as soon as revived, wherever this was possible, the emergency wards being crowded. It was estimated that upward of two hundred beds were almost continuously occupied by heat prostration patients in the hospitals of Manhattan alone.

Health Expert Arrested.—Eugene Christian was a prisoner before Magistrate Breen, in the Jefferson Market Police Court, on July 7, charged with having practised medicine without a license. The arrest was caused by detectives employed by the New York County Medical Society. Christian seems to have advertised rather extensively in the better class of magazines as a "naturalist and food expert." According to the detectives, the man would make a diagnosis of each case, and prescribe his own prepared health foods for the patients, as well as suggest proper exercise. The defendant in the case is said to be an author, having written several books on the subject of "How to Eat," some of which are used in the colleges and universities of this country. Mr. Gardenhire, who appeared for the food expert, said: "Mr. Christian never made any effort to practice medicine." The defendant himself said: "I did what a swimming instructor or an athletic instructor would do, gave advice along a special line, in this case as to 'How to eat.' I am sure I violated no law in what I did do."

Work of German Hospital.—The German Hospital and Dispensary, of whose advisory committee Carl Schurz is president, received bequests amounting to \$16,986.80 during the last year, says the annual report, just received. Beds were endowed by Julius Heimann, Herman Sielken, and George Ehret. The number of patients treated was 3,832, and 1,854 surgical operations were performed. The cured and improved patients were 85.67 per cent., while 9.07 per cent. died. Of those admitted, 1,647 were natives of Germany and 1,200 of the United States. The classified list shows that the patients included 131 bakers, 784 housewives, 183 laborers, 214 schoolboys, 123 schoolgirls, 143 servants, and 159 small children, these being the only classes represented by more than 100 each. The principal causes of death were chronic nephritis, 28; lobar pneumonia and myocarditis, 13 each; chronic endocarditis, carcinoma of the stomach, acute appendicitis, and carcinoma of the bladder, 9 each. The institution has cared for 987,959 patients since 1857. Since 1866 the bequests have amounted to \$478,008.26. Last year was the first in which the hospital and dispensary were managed under the new charter and by-laws, with the board of trustees in complete charge.

Floating Hospital's Trip.—The floating hospital of St. John's Guild, Helen C. Juilliard, made her first trip of the season on July 6, leaving the pier at the foot of West Fifth Street, and making landing at West Thirty-fifth Street and West Tenth Street. Three hundred and thirty-six mothers and children were taken for a sail on the waters of the bay. From now on throughout the summer the hospital will make trips daily except Sunday, and when the weather is stormy. On Mondays and Wednes-

days the hospital will land at North River points, as above. On Thursdays and Saturdays it will make landings along the East River—at the foot of Twenty-fourth Street, leaving at 8 A.M.; foot of Third Street, leaving at 8.30 A.M.; and Market Street, at 9 A.M. On Tuesdays and Fridays the hospital will leave the foot of East Twenty-fourth Street, Manhattan, at 7.30 A.M., and then make landings at Brooklyn points, as follows: North Second Street, 8 A.M.; Hudson Avenue, 8.30 A.M.; Hamilton Avenue, 9 A.M. The general plan of previous seasons will be followed. The infants will be given their feedings as required. The other children will be given milk to drink during the morning, and again in the afternoon, and the adults and older children will be furnished with a hot meal at noontime. Tickets of admission to the hospital are distributed at nearly 1,500 points throughout the city, including all the prominent hospitals, dispensaries, diet kitchens, day nurseries, missions, many doctors and druggists, and by individuals. Tickets for distribution can be had by applying to the general agent, at No. 501 Fifth Avenue, New York. The floating hospital has been thoroughly equipped under the new regulations of the United States Steamboat Inspection Service, and has a complete fire-fighting apparatus, 1,624 life preservers, life rafts, life boats, and life buoys.

Work on New Bellevue Hospital Soon to Begin.—The construction of the first section of the new Bellevue Hospital is to begin in a few weeks. The first section, to be known as the southern wing, will consist of two pavilions seven stories high. Each will be 150 feet long and 36 feet wide. They will inclose a court 64 feet wide on two sides. The sum of \$850,000—one-tenth of the estimated cost of the entire structure—was appropriated by the Board of Estimate and Apportionment, to start the work, and this amount is now available for the erection of the southern wing. The new Bellevue will occupy the site of the old institution. The boundaries of the hospital grounds are Twenty-sixth and Twenty-eighth streets, First Avenue and the East River. The hospital was founded in 1816, but the greater part of the present institution was completed in 1855. The old hospital is always overcrowded, and is lacking in many facilities necessary to an ideal modern hospital. McKim, Mead & White, the architects, originally planned a new structure to cost \$11,000,000, but the plans were modified later without sacrifice to capacity or convenience. The two new pavilions of the southern wing are to be connected at their western extremities by a seven-story administration building. The eastern extremities are to be joined by open three-story arches. "Sun rooms" and open balconies and roof gardens are to be special features of the institution. The experience of the past few years in building hospitals throughout the world has demonstrated the value of this adjunct to medical treatment. There will be sufficient balcony space to accommodate all the patients of all the wards. One ward in the southern wing will be devoted exclusively to the care of consumptive patients. The purpose of the Board of Trustees is to build at the rate of \$1,000,000 a year, tearing down sections of the old buildings as the work proceeds.

Hospital Doctors Hurt.—Accidents to ambulance surgeons are becoming positively epidemic in New York, at the rate of two a week. On the afternoon of the Fourth an ambulance from the Hudson Street Hospital was struck and overturned by a Sixth Ave-

nue car, at Reade and Centre streets. Dr. T. Harris Cherry was hurled from the ambulance ten feet, into a group of women, children and lunch baskets waiting for a car at the corner. He was taken unconscious to the hospital, where it was found he was suffering from concussion of the brain, two severe scalp wounds and three broken ribs. Fears were entertained at first that he might not recover, but at last account he was doing well. On July 7 the ambulance of the Seney Hospital, in Brooklyn, while responding to a call from a shipyard in the Erie Basin, was upset by a collision with a trolley car, and its three occupants, two doctors and the driver, were hurled to the street. The accident occurred in Third Avenue and Fourteenth Street, the ambulance reaching that point simultaneously with a trolley car bound for Bay Ridge. The ambulance horse dashed into the side of the car and the ambulance turned upside down several yards away. Dr. A. C. Hutcheson, the ambulance surgeon; Dr. Wilson B. Zimmer, a member of the hospital staff, and the driver, Charles Parker, all struck on their heads some distance from the wreck. The victims were picked up, the young doctors unconscious, and carried to a drug store. Each was cut on the head and bruised on the arms. They were attended by Ambulance Surgeon Livingston, of the Norwegian Hospital, and removed to the Seney. It was found that Dr. Zimmer, who was still unconscious when he reached the hospital, had sustained concussion of the brain. The doctors said that he would recover. He is a graduate of Cornell, and has been attached to the Seney Hospital for the last six months. Dr. Hutcheson and the driver escaped with painful scalp wounds.

Pasteur Treatment of Rabies.—The New York Health Department gives the Pasteur preventive treatment for rabies at the Research Laboratory at the foot of East Sixteenth Street. In addition, the virus is sent out mixed with a preservative, to be administered by the attending physician to persons desiring to take the treatment at home. When sent from the laboratory it is mailed daily by special delivery. The results of treatment given by the latter method have been as satisfactory as when administered at the laboratory, but it is considered advisable that not more than two days should elapse between the mailing of the virus and its injection into the patient. The course of treatment lasts from two to three weeks. It is strongly recommended that wounds inflicted by rabid or suspected animals be thoroughly cauterized with fuming nitric acid, or, if this is impossible, with the actual cautery. Immediately washing out of the wound is also advisable. When possible, it is recommended that animals suspected of rabies be securely chained and kept under observation for eight days. If rabies exists, symptoms will develop so that a definite diagnosis is possible within this time. If the animal is killed the carcass may be sent to the laboratory for diagnosis. The routine is to make an examination of smears and stained sections of the brain tissue, and also to make animal inoculations. By the former method a positive diagnosis may be reached in from thirty-six to forty-eight hours. A failure to find the characteristic lesions does not, however, exclude rabies. In the event of a failure to find the lesions, the animal inoculations are relied on for a diagnosis, which usually requires from eight to eighteen days. In sending animals from a distance it is recommended that, if small, the entire body be sent. If this is impossible, the head alone should be

sent. The animal or head should be securely fastened in a box, and packed with a considerable quantity of ice and sawdust; the whole to be shipped to the laboratory in a larger box.

PHILADELPHIA.

Appointments.—Recently several changes in the Germantown Hospital staff were announced. Dr. John Hedges and Dr. William K. Muller were made chiefs of the medical department, and Dr. Samuel Rhoads was made assistant chief.

"Headache Powders" Fatal.—The depressing effects of the coal-tar products are illustrated in the death of a lady who, in attempting to get relief from the headache she had been suffering with for several months, took two "headache powders" and died soon afterward.

"Four-Day Fever."—The physicians at Coledale, a town in the eastern part of Pennsylvania, are puzzled by the appearance of a strange disease, which, from its rapid spread, seems to be contagious. It begins with violent headache, followed by high fever, which lasts four days. In some cases the skin is covered with red blotches. Altogether ninety-three cases have been reported, but no deaths.

Railroad Medical Examiners to Aid Dr. Dixon.—Following is a list of the examiners of the two roads appointed by Dr. Dixon as inspectors: Pennsylvania Railroad—Dr. Samuel W. Latta, Philadelphia, chief; D. W. Nead, C. J. Roberts, E. C. Town, J. L. Bower, Reading; J. L. Wright, Columbia; W. T. Bishop, York; S. M. Crawford, Harrisburg; A. T. Poffenberger, Sunbury; H. E. Westhaeffer, Williamsport; J. B. Lincoln, Renovo; S. A. Bonnaffon, Erie; R. B. Moore, Huntingdon; H. W. Pownall, Tyrone; W. B. Diefenderfer, Altoona; C. F. Hough, Cresson; C. W. Banks, Derry; D. M. Easter, Youngwood; W. K. T. Sahn, Pittsburg; J. B. Hillman, Pitscain; J. C. Lemmer, Oil City. Reading Railway—Dr. Casper Morris, chief. District No. 1, office, Columbia Avenue Station: F. E. Brister, Francis S. Ferris, Norris S. McDowell. District No. 2, Reading: Charles A. F. Detweiler, Albert F. Bronson. District No. 3, Pottsville: Thomas F. Heebner. District No. 4, Tamaqua: William H. Brothers.

Dr. Samuel W. Latta informed Dr. Dixon that each car, containing a case of any contagious disease, was fumigated, the inner surfaces washed down with bichloride solution, and allowed to stand with windows raised for twelve hours. Dr. Casper Morris stated that similar precautions were taken on the Philadelphia and Reading Road.

CHICAGO.

Chicago's New Medical Magazine.—*Surgery, Gynecology and Obstetrics*, a new international magazine of surgery, edited by a staff of the most eminent surgeons and physicians, made its first appearance in Chicago this week. This new publication will be issued monthly, and is the only one of its kind in the West, and one of but three in the entire country. Dr. Franklin H. Martin is managing editor, and Dr. Allen B. Kanavel associate editor. The other members of the regular editorial staff are: Drs. John B. Murphy, E. Wyllys Andrews, F. A. Besley, C. S. Bacon, Rudolph W. Holmes, Nicholas Senn, J. Clarence Webster, E. C. Dudley, John C. Hollister, William R. Cubbins, and C. V. Bachele.

Comparison of Death-Rate for First Six Months of 1905 With Same Period of 1904.—At the close of the first six months of the year it may be pre-

dicted, with a fair degree of certainty, that 1905 will establish a new record for the healthfulness of Chicago. This prediction is based on the fact that the average annual death rate of the first six months of each year during the ten years, 1895-1904 inclusive, was 15.51 per 1,000 of population. For the last six months of each year the average was 14.43, or 7.48 per cent. lower. The rate of the first six months of 1905 is 14.09—the total deaths being 13,918. If the second six months should be 7.48 per cent. lower than the first six months its rate will be 13.04, the total deaths for the year about 26,800, and the annual rate for 1905 will be 13.56—the lowest ever recorded for Chicago. The lowest previous was 13.88 per 1,000 in 1901—a year of unusual healthfulness throughout the world. While there were 224 fewer deaths from all causes and at all ages, 672 fewer between the ages of five and sixty years, and 445 fewer over sixty years than in the corresponding period of 1904, there were 894 more deaths under five years of age. Of this excess less than 50 per cent. is accounted for by the unusual prevalence of some of the contagious diseases of infancy and childhood—most markedly measles and whooping cough. There were 185 deaths from measles, or 169 more than last year, and 258 more from whooping-cough, or 237 more than last year. An examination of the records shows that of the remaining 50 per cent. excess of under-five-year deaths, a certain share is due to an unusual proportion of deaths at this age period from the acute intestinal diseases, from bronchitis and from pneumonia. While the first two show increases of only 31 and 20 respectively and pneumonia shows a decrease of 563, the number of deaths from these diseases among children was much greater than last year. For the rest, an increase in the developmental affections of infancy—premature birth, injuries at birth, congenital debility, heart defects, etc.—is responsible. Compared with last year the death-rates of cancer, consumption and diphtheria are substantially unchanged; pneumonia is 12.4 per cent. less; nervous diseases, 22 per cent. less; typhoid fever, 27 per cent. less, and scarlet fever 63 per cent. less. Suicides increased 55 per cent.

CANADA.

Medical Matters in Hamilton, Ont.—Owing to disagreement with the Board of Trustees of the Hamilton General Hospital, Dr. Freeman, the medical superintendent, resigned, Dr. Walter Langrill, the Medical Health Officer, succeeding him, and Dr. Roberts, of Hamilton, succeeding Dr. Langrill.

Few Insane Now in Ontario Jails.—Dr. R. W. Bruce Smith, Inspector of Asylums and Prisons for Ontario, has just completed a tour of inspection of the institutions in the eastern part of the province, and reports that there are very few insane people confined in the common jails in that part of Ontario. In the Toronto jail there were at this time last year no less than thirty-six lunatics, while at the present time there are but three.

Dominion Aid to Consumption Sanitaria.—The joint committee of the Senate and House of Commons of Canada, to consider measures for checking the spread of tuberculosis met on July 6, at Ottawa, and appointed a subcommittee to devise plans to reach the Government. It was the consensus of opinion of the members of both houses present, that the Government should make a substantial grant toward the work of erecting sanatoria in different parts of the Dominion.

Manitoba Medical College, Winnipeg.—The annual calendar of the Manitoba Medical College makes some important announcements, chief of which is that operations have commenced on a new building adjacent to the Winnipeg General Hospital. The faculty has also been enlarged to a total of twenty-nine members by the addition of the following practitioners of Winnipeg: Drs. A. J. Douglas, O. Bjornsen, G. Hiebert, C. C. Field, W. Rogers, H. Mackay, S. J. Elkin, A. J. Burrige, and W. Webster. The five-year course has also been adopted. The new college building will afford accommodation for all branches of medical study for many years to come.

Annual Report of the Royal Jubilee Hospital, Victoria, B. C.—The fifteenth annual meeting of the Board of Directors of the Provincial Royal Jubilee Hospital of Victoria, B. C., was held during the latter part of June in that city. The chief event of the past year in connection with this hospital was the opening of the new Strathcona wing, and the most important item in view is the proposed children's ward. The number of patients treated during the last hospital year amounted to 1,058, as against 1,048 for the previous year. The total collective days' stay was 21,307 days. The daily average number of patients shows an increase of 4.43. The cost of maintenance during the year amounted to \$36,294, and the daily average cost per patient was \$1.70. Dr. Edward Hasell is the resident medical officer.

New Sanitaria.—A sanitarium for consumptives is to be erected near Holland, Man. The site for the Provincial Sanitarium for Consumptives of British Columbia has been chosen. It is to be at Savonna, B. C., and will first make its appearance as a canvas settlement, the patients being all housed in tents. Mr. Thomas McCormack, of London, Ont., has placed \$3,500 at the disposal of the National Sanitarium Association, for the erection of a cottage on the grounds of the Muskoka Sanatorium. The Salvation Army is erecting a fine new hospital in Winnipeg, Man., to have a frontage of 150 feet. It will engage fifteen nurses and will be ready for occupancy by January next. A new wing is being added to the Western Hospital, Montreal, which, when completed, will enable this hospital to accommodate 500 patients.

Toronto Doctors Endorse New General Hospital Scheme.—"And those who came to scoff remained to pray" might be said of a gathering of Toronto physicians called together July 6, for the purpose of entering a protest against the proposed grant of \$200,000 which the City Council of Toronto will give toward the erection of the new General Hospital, which is—in a large measure—to provide facilities for clinical work in connection with the medical faculty of Toronto University. It is understood that the fervent exhortations of Dr. Charles Sheard, Toronto's Medical Health Officer, were largely responsible for the conversion of the recalcitrants. After he had explained what he would recommend to the City Council, there was a great rush for the penitent bench, there being only three "doubting Thomases" left in the outer darkness. Operations will soon be gotten under way for the best equipped hospital in Canada, as there is now in sight an even million of dollars to commence with. Dr. J. W. Rowntree, of last year's house staff, has been temporarily appointed superintendent, in succession to Dr. O'Reilly, and the hospital management is advertising for a superintendent—either a business or a professional man.

Annual Meeting of the Ontario Medical Council.—The Council of the College of Physicians and Surgeons of Ontario held their annual meeting in Toronto during the past week, when the following officers were elected for the coming year: President, Dr. A. A. Macdonald, Toronto; Vice-President, Dr. W. H. Moorhouse, London; Registrar, Hon. Dr. Pyne; Treasurer, Dr. H. Wilberforce Aikins. During the course of the meeting, which took up the greater part of the week, numerous subjects of importance, both to the profession and the public, were discussed. One question discussed was that of Christian Science, the entire matter being left in the hands of the Legislative Committee, consisting of Dr. W. H. Moorhouse, London; Dr. J. L. Bray, Chatham, and Dr. Spankie, Wolfe Island, together with the Past President, the Hon. Dr. Sullivan, who will determine whether it will be wise in the interests of the profession, as well as in the interests of the public, to approach the legislature, asking for the abatement of the evil. This same committee will also place before the Government the lack of accommodation for the treatment of the consumptive poor of the province, and will ask that substantial aid be given toward municipal sanatoria. The official prosecutor reported that during the past year fifty-two cases had been dealt with, in twenty-four of which convictions had been secured, while nine left the country, eleven dismissed, and six not proceeded with. The financial statement was satisfactory, showing a reduction of the mortgage loan on the medical building of \$5,000. The receipts amounted to about \$35,000, and there was a balance on hand of \$5,764.92, in spite of the fact that there was a good number of practitioners throughout the Province who were in arrears for their annual dues. The Property Committee reported that they had decided that at the present time it would be unwise to proceed with the sale of the building which was ordered by Council a year ago. Owing to the fact that there had been some agitation to have the annual examinations held at London, in addition to Toronto and Kingston, the solicitor was asked for his opinion of the matter, who interpreted the clause in the Ontario Medical Act to the effect that special legislation would be required from the legislature to provide for the holding of examinations at other points, as specified in the act, namely, Toronto and Kingston.

GENERAL.

Roosevelt to Doctors.—At the convention of the Association of Physicians of Long Island, held at Oyster Bay, on Wednesday, President Roosevelt delivered the principal address.

Iowa and Illinois Central District Medical Association.—The annual meeting of the Iowa and Illinois Central District Medical Association was held at Schützen Park, Davenport, Iowa, July 13.

The Fourth's Death List.—The *Chicago Tribune's* list of Fourth of July casualties throughout the country as revised on July 5, shows: Dead, 54; total injured, 3,157; by fireworks, 1,258; by cannon, 294; by firearms, 446; by gunpowder, 706; by toy pistols, 373; by runaways caused by explosions, 80. Total fire loss, \$251,317.

Doctors Leave the Raybrook Hospital.—A meeting of the Board of Trustees of the State Hospital for Tuberculosis, at Raybrook, N. Y., has been called to appoint a successor to Dr. Pryor, the superintendent, who has resigned. Dr. Merriman, a member of the staff, has also resigned. Dr. Pryor will reside in

Saranac Lake, where he will resume the practice of medicine.

American Pharmaceutical Association.—The fifty-third annual meeting of this association will be held at Atlantic City, N. J., September 4 to 16 inclusive. Application for membership may be sent to the Secretary of the Committee, H. M. Whelpley, 2342 Albion Place, St. Louis, Mo., up to September 1, after which date they should be sent to him in care of The Islesworth, Atlantic City, N. J.

New Jersey Bars New York Doctors.—The New Jersey State Board of Medical Examiners has decided to cease indorsing New York medical licenses for the present. This is retaliation against New York. The board's resolution says: Whereas, The educational and examining standards for the medical license of New Jersey are at least equal in all respects to those of New York and in some respects higher, and Whereas, The degree of unreasonableness in the matter of inter-State indorsement on the part of New York cannot be further ignored; therefore be it Resolved, That on and after October 16, 1905, the date of the next regular meeting of this board, the indorsement of medical licenses issued by New York will be suspended until further notice.

Railway's Ban on Doctor.—The Connecticut Railway and Lighting Company has posted on its bulletin board in Ansonia, Conn., the following notice: "Whenever you have occasion to summon a physician to attend an injured person you will please bear in mind that the company has an arrangement with most of the practising physicians of Ansonia, Derby and Shelton, to respond to emergency call. Dr. W. H. Conklin is an exception to this rule. Superintendent Beardsley." Dr. Conklin has had many railway cases, and in recent suits his testimony had weight with the court in awarding damages. The doctor has had the notices printed and mailed to the conductors and motormen because, he says, he does not wish the men to forget the rule in their excitement when an accident occurs and call him, which would jeopardize their places.

Mysterious Eye Disease in Central Africa.—The *London Mail* reports a somewhat remarkable eye disease as at present prevalent in several parts of British Central Africa, Northwestern Rhodesia, and in Portuguese Zambesia. At first it was noticed in cattle, sheep and goats, and only recently was it found to have attacked the natives. The disease is at present raging from Port Herald, a British station on the Zambesi, right on toward Tete, a distance of over 200 miles, and at this latter place it is reported to be quite an epidemic. Mr. William Arnott, a traveler, who recently returned from Tete, states that he observed hundreds who were suffering from the disease, and a large number were totally blind. One of the sights of Tete on a Sunday morning is the long lines of blind people who enter the town to beg, each line being led by a child.

Come Back Blue From Panama.—Many canal employees were among the sixty cabin passengers who arrived on July 5 from Colon aboard the Panama Railroad's steamship *Advance*. They took a pessimistic view of the sanitary situation on the Isthmus. Some declared that not more than 10 per cent. of those who were needed by the Government in clerical work were able to attend to their duties, and that many more cases of yellow fever existed than were officially reported. Aboard the *Advance* was the body of Samuel Hirsh, who died of yellow fever in Panama. Three passengers by the *Advance* were detained and sent to Hoffman Island for observation because they had unusually high temperatures. They are George Baylor, an en-

gineer on one of the boats of the Canal Commission; Edward P. Penick, a laborer, and Frank Namact, a boilermaker.

New Superintendent for Bellevue Hospital.—Dr. Samuel T. Armstrong, medical director of the Washington Life Insurance Company, has been suggested for Superintendent of Bellevue and Allied Hospitals. It is thought that he will receive the appointment at the next meeting of the Board of Trustees. Dr. Armstrong is a native of St. Louis and received degrees from the St. Louis University and the St. Louis Medical College. For ten years he was in the United States Marine Hospital Service.

American Hospital in Turkey.—The trustees of the American Hospital and Training School for Nurses, to be established at Constantinople, Turkey, met recently and adopted plans for the establishment of the hospital. Among the trustees are Henry O. Dwight, author of "Constantinople and Its Problems," James S. H. Umsted, editor of the *Wall Street Summary*; the Rev. Charles H. Richards, the Rev. Charles H. Creggan, Ernest Abbott and Omar H. Carrington. Dr. Thomas Spees Carrington is to have charge of the hospital. He has been engaged in practice in Turkey and knows the local conditions. He will take with him several American trained nurses and they will train Turkish girls to be nurses and will go into Turkish homes and teach the mothers how to reduce the rate of infant mortality. In the past half of the Turkish babies have died in infancy and the need of a modern hospital with all the best American appliances and medicines for treating sick children is great. In the course of time an infant incubator will be added, but Dr. Carrington said yesterday that he would not take one with him on his first trip. The hospital staff will also endeavor to remove the Turkish prejudice against surgery, which now makes the practice of that profession a precarious undertaking in the Ottoman Empire. "The Turk is not as violently opposed to surgery as he once was," remarked Dr. Carrington. "If a patient dies under the knife the surgeon is no longer sewed in a bag and given a chance to swim the Hellespont. Nevertheless the surgeon whose operation is unsuccessful is liable to be made defendant in both civil and criminal actions instituted by relatives of the deceased." Checks in aid of the hospital should be made payable to Brown Bros. & Co., bankers, 59 Wall Street.

OBITUARY.

Dr. GEORGE M. SCHWEIG, who for many years was in the service of the Board of Health, died on July 5, at his home, No. 2880 Broadway, New York. He was born in Germany sixty-three years ago, and came to this country when nine years old.

Dr. H. M. STOKES, a well known physician of Philadelphia, shot himself on July 7, at his home in that city.

Prof. HERMANN NOTHNAGEL, the well known clinical authority and author of important medical works, died in Vienna on July 7. Papers were found in the professor's room in which he had described his symptoms for hours before his death, including those of three severe attacks of coma. Hermann Nothnagel was born in the Province of Brandenburg, Germany, in 1841. He was graduated from the medical school in Berlin in 1864 and immediately became a teacher, serving in Königsburg, Berlin, Breslau and Jena. He was appointed professor of clinical medicine in Vienna in 1882 and was the author of a number of well-known medical text-books, among which are "Pathology of the Nerves," "Use of Drugs," "Diagnosis of Brain Diseases," "Researches in the Physiology and Pathology of the Intestines," and a "Handbook of Medicine."

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON GENITO-URINARY DISEASES.

Stated Meeting, held February 15, 1905.

The President, Ramon Guiteras, M.D., in the Chair.

Epithelioma of Penis, Amputation of Entire Penis, one Testicle and Two-Thirds of Scrotum with Transplantation of Urethra, Recovery.—Dr. Follen Cabot, Jr., reported the case of a German, forty-one years old, single, who had syphilis sixteen years ago, for which he had little treatment. He first saw him in the City Hospital last November. His family history was good. The disease of the penis began as a pimple under the foreskin, and in eight months had involved the whole penis in a gangrenous slough and destroyed the penile urethra. The scrotum was as large as a cocoanut, and when seen by Dr. Cabot it was filled with pus and extravasated urine. A urethral opening was made in the perineal region and two-thirds of the scrotum, all of the penis, inguinal glands, and one testicle removed. The patient made a perfect recovery, and now urinated without difficulty.

Cancer of Penis.—Dr. Follen Cabot, Jr., presented a man aged forty-seven years, who had never had intercourse in his life, and also who had never retracted his foreskin. A pimple had appeared under his foreskin which had increased in size and had extended to within one-half an inch of the pubis. He said that Dr. Lilienthal had stated that, in a large experience, he had never seen a cancer of the penis appear in a man of the Jewish race. This patient had been under observation for about one year. A small piece of the growth was removed and examined microscopically. Reported to be epithelioma. An interesting point in the case is the absence of involvement in the inguinal glands, although the disease has been present on the penis a year. The pathologist who made the examination was not perfectly satisfied with the findings because an insufficient amount of the growth was given him.

Dr. L. Bolton Bangs, after examining the patient carefully, said that there was no doubt in his mind about the diagnosis, but the condition had remained quiescent so long he did not know. He believed this man required as radical an operation as the first case reported by Dr. Cabot.

Multiple Fistulae of the Perineum.—Dr. Ramon Guiteras presented a patient that had been shown before the Academy about five years ago. He had had an extravasation of urine following a rupture of the urethra. When he was first presented he had multiple sinuses which could not be cured at the time. His reason for presenting him was because he wished the opinion of the gentlemen present, and asked their advice regarding operative measures. The old scars were shown. When first seen he had had extravasation for forty-eight hours, and the retention of urine began with so much pressure on the tissues outside the urethra that it caused a compression of such a degree that he could not urinate and the scrotum seemed to be on the verge of gangrene. Six incisions were made and a purulent material was squeezed out, so that he had been enabled to pass a catheter into the urethra; this was left in situ and a wet dressing applied. After this the patient was able to urinate, but the sinuses developed, and, at this time, he had been presented to the Academy. One of these sinuses ran from behind the corona down beneath the testis, a distance of about six and a half inches. Some of them came through the penis and two

were in the perineum. Numerous suggestions were made regarding the treatment of the fistula, and, as a result, he performed a perineal section, draining the bladder, and then proceeded to treat these strictures by the injection of carbolic acid in some and iodoform emulsion in others. The long fistula, however, was the one that caused the most trouble, and which he had puzzled the most over. He threaded a probe with iodoform gauze and pulled it through, and so irritated the sinus; this was left in place for twenty-four hours and then withdrawn. This set up an adhesive inflammation and healed the fistula. There were some that did not heal and to which he applied the negative pole of a battery, and with success. The perineal wound closed and then an instrument could be passed through the urethra. A constriction took place and a second perineal operation became necessary; after that a sinus remained in the perineum. During the last two years some contraction had taken place in the cicatricial tissue, so that, when the patient urinated, with the exception of a few drops, it came from the perineum. Two months ago another operation was performed, a perineal section and an internal urethrotomy, with drainage for four or five days, and then he could pass a No. 32 soft rubber catheter through the urethra, and allowed it to remain for four weeks. When it was withdrawn the perineal wound was nearly closed. Sounds were passed for some time. Two weeks after leaving the hospital a No. 21 American sound passed readily. The urethra was still of large size, and there was a very slight fistula present. The probabilities were that it would again contract, and must be operated upon. Sounds should be frequently passed. The case was of particular interest because of its rarity and because of the fatty deposits between the areas of fibrous tissues.

Extrophy of Bladder.—Dr. Ramon Guiteras presented this patient, a strong and healthy man, who had had an extrophy about four inches in diameter. The pubes was separated at the symphysis between three and four inches, and the result was that the corpora cavernosa extended backward from the membranous or prostatic urethra to its insertion. The only thing remaining to be seen was the penis, which was in a state of hypospadias. In other words, it was simply a glans attached to the prostatic portion, without any apparent penile portion. The ejaculatory as well as the prostatic ducts could be seen. There were about twenty-four or twenty-five openings of prostatic ducts, which extended up into the prostatic follicles besides the ejaculatory ducts. The patient had suffered a great deal since childhood, and had tried a great variety of urinals, but without relief; the result was that he at all times had a leakage of urine, causing much chafing. At last he gave up trying to use any urinal, and went about with trousers continually wet. His bladder was very much inflamed, and at all times mucus could be seen on its walls as well as ulcerations. The patient wore ulsters summer and winter, which he could keep away from the irritated surface by holding his hands inside of its folds. His occupation, a blacksmith, kept his body flexed, and so the clothes were kept away from the raw surfaces. When the question of operation came up he was given the choice of a plastic operation, taking a flap from around the bladder, or a transplantation into the rectum, and it seemed to him that better results could be had by doing the plastic operation. The transplanting of the ureters into the rectum, while attended with success, caused at the same time a very irritable condition of the rectum. In time the rectum could hold a certain amount of urine, yet the urine escaping from the rectum would produce an irritation about the anus

and the cleft between the nates and perineum. Again, the rectum itself might become inflamed. In these cases there usually occurred later on an extension of the inflammation up the ureters and into the pelvis of the kidney and giving rise to a pyelitis, and the patients usually died from a pyelonephritis. The operation Dr. Guiteras performed was a modification of Wood's, simply a skin flap being made, measured so as to cover the wall of the bladder. In this patient the skin of the abdomen seemed to be devoid of hair. If hair had been present electrolysis would have first been done. He brought the flap down over the bladder, freeing the edges of the skin about its circumference and the bladder, beveling both. He brought the skin flap down to the base of the bladder and sewed it there; then he took two inguinal flaps and brought them over the raw surfaces; these flaps came in contact with the new surface of the abdominal flap from the patient. Then the sides of the prostatic portion and glans which were made raw on their outer surface were brought together and sewn. The prepuce below was taken and split laterally and brought over the glans. The mucous membrane was dissected up so as to give a larger flap of raw surface of mucous membrane and prepuce, which was sewn into the bottom of the anterior flap coming down from above. Catheters were introduced into the ureters and brought out through a canal made by the plastic operation. A soft rubber catheter was also introduced into the bladder through the urethra. Dr. Ayres had charge of the case after Dr. Guiteras left, and the patient's recovery was most uneventful. In a great many of these cases a number of plastic operations have to be performed, but in this case there were but two sinuses remaining, one healing about three days after operation, and the other less than three weeks. They both healed spontaneously. The denuded area above was covered by skin grafts taken from the thighs. Without further operation the artificial bladder was able to hold urine, and he attributed this to the fact that the urethral catheter had been introduced into the ureters and, in this way, the urine had been carried directly to the outside and had not come in contact with the bladder wall. But Dr. Ayres had stated that after two days the urethral catheters would not drain, and the soft rubber catheter was left in the bladder. He believed this was the secret of the rapid healing of the wounds in this case. There was at present no leakage, and the patient was up and about and could hold two ounces of urine while standing and more when reclining. As contraction further took place he would be able to hold more and more. Later irrigations of the bladder would be practiced, and this would tend to dilate it and make it hold more. Even if this patient lived a catheter life the result would be almost as good as if he had but slight control of the bladder. His prostate was about one-half an inch up from the anus. Before the operation one could palpate the prostate because of the absence of the pubes. Six weeks after the operation the patient experienced his first erection, which showed a beginning activity of the genital apparatus, and this he believed would be followed by even more activity of the internal genitals. When the patient was born, if the pelvis had been strapped and pressure applied, the pubic bones might have become approximated.

Dr. Martin W. Ware asked Dr. Guiteras if a microscopical examination had been made of the fatty deposits. Or was the condition not a false elephantiasis, due to an interference with the lymphatic circulation, because of the many incisions necessitated.

Dr. L. Bolton Bangs said that multiple fistulae, due to obstructions in the urethra, should be treated by gen-

erous and radical removal of the obstruction, together with perineal drainage of the bladder of sufficient duration to satisfy the operator that all indications of infection were no longer present. With regard to the second case, he thought Dr. Guiteras was to be congratulated upon the results he had obtained. He had seen cases in which there was a minimum of separation of the pubic bones, but with loss of the structures above the pubes. They all had suffered the same. All the cases were miserable creatures and seemed to him to be degenerates in some way. Even if one succeeded in the primary operation, and the patient did not require a secondary one, much had been done for the individual, but they generally required several operations, and even then the result was not satisfactory. The last patient he attempted to operate upon he could do nothing because the patient nearly died from chloroform poisoning. This patient was a young man of considerable intelligence, but he too was a degenerate in other ways. Recently he had received a letter from his mother in which it was stated that his pusillanimous nature had disappeared, and that he had developed some of the traits of manhood, becoming more and more of a man as time went on. Dr. Bangs said he knew of no better operation in these cases than Wood's.

Dr. William K. Otis said that extrophy of the bladder was one of the most distressing affections, and although many operations had been devised for its relief the results were almost uniformly bad. Therefore, he thought Dr. Guiteras was greatly to be congratulated upon his success in this instance.

Dr. Guiteras said, in answer to Dr. Ware, that he believed there was a pseudo-*elephantiasis* present. He had had no microscopical examination made of the fatty deposits; they might not be fatty, but some other soft tissue. With regard to the extrophy of the bladder case the patient was operated upon less than two months ago, and he certainly thought that in such a short time the patient had made an excellent recovery, although it would require some time before the cystitis became cured.

Plastic Operation for the Cure of a Recto-Urethral Fistula.—Dr. Martin W. Ware presented this patient to show a successful effort in curing what is conceded to be a very bad form of fistula occurring between the rectum and urethra. The patient one year ago contracted a urethritis while in Europe, but consulted no physician. Four months later he came to this country and was shortly afterward admitted to the Mt. Sinai Hospital for the following symptoms: An intense desire to pass his urine associated with a very great deal of rectal tenesmus; there was some temperature and pain in the perineum; also a discharge from the urethra, there being both a posterior as well as an anterior urethritis. Examination revealed a very tender but not large prostate. The secretions contained gonococci. The treatment instituted four months after his attack of gonorrhea was an expectant one; he was not irrigated, but simply kept at rest in bed, and hot rectal irrigations and hot sounds used. The vesical tenesmus continued, and after one week the pains became so severe, with retention of urine, that it became necessary to use the catheter. The rise in temperature led to the suspicion of an abscess, and this was verified by rectal examination, a fluctuating point being made out. Because of a freer discharge of pus from the urethra the treatment outlined was continued a few days, but as the patient became septic it was deemed advisable to give freer vent to the pus. To verify its presence, a puncture was made into that part of the prostate which bulged into the rectum, and pus was evacuated. With

a few strokes of the knife the abscess was drained by way of the perineum. As the patient was about to undergo the operation he said that he had a discharge of pus from the anus. Two weeks after healing of the perineal wound took place, but urine began to be discharged from the rectum; at first urine passed through the rectum as well as through the perineal fistula. The perineal wound was then tamponed, but a large fistulous opening in the rectum, which caused the patient great discomfort for many weeks, persisted. Nothing could be done to prevent the water being passed by way of the rectum, notwithstanding the perineal wound had closed. Perineal section was again performed, and a communication was found to exist between the membranous urethra, at a point close to the prostatic apex and the rectum. The opening in the rectum was rather a long slit and the fistula funnel-shaped, with the apex of the funnel towards the urethra. The fistula was excised, the rent in rectum sewed with Lembert sutures, and the opening in the urethra likewise, and catheter à demeure left in situ for ten days, and the bowels kept costive as long as fourteen days. Six weeks later, when he was discharged from the hospital, his urethritis still persisted. Since then an epididymitis set in and further treatment of his urethritis was deemed inadvisable. He presented this patient particularly for the reason that some years ago Dr. Tuttle had presented a case of recto-urethral fistula and emphasized the fact that non-success attended any operation as a rule, and that certain difficulties were encountered which he had endeavored to overcome. He cited a number of authorities to prove how very difficult it was to cure these cases. The operation Dr. Tuttle advised, Dr. Ware believed, from a technical standpoint, to be a difficult one, and the space for manipulation was very small indeed.

Dr. Follen Cabot, Jr., said that the only case of recto-urethral fistula that had occurred in his experience followed a prostatectomy where he tore through into the rectum, the opening being the size of the end of a finger. He sewed it up at once, taking but one stitch, and no further trouble resulted. It was not, strictly speaking, in the urethra, but more in the perineal opening.

Dr. Henry G. Spooner asked whether there was a proctitis of gonorrheal origin in the case reported. Ten such cases had been reported in which gonorrhea of the rectum had been occasioned in this way, i.e., through the recto-urethral fistula.

Dr. Ramon Guiteras said he admired Dr. Ware's courage in reporting such a case. He said he had gone into the rectum three times while doing perineal sections. In looking through the literature there were but few men who reported such accidents, and he began to think he was the only one who had committed such an act until conversations with his friends proved differently.

Dr. Martin W. Ware said he once had the misfortune to get into the rectum while doing a prostatectomy; the rent was sewn up, and the patient made a prompt recovery. He referred to another patient, an old gentleman of eighty years, who was doing very well after a prostatectomy, but, in giving an enema, the nozzle was pushed through the rectum. In reply to Dr. Spooner's question, I wish to state that the prostatic abscess revealed no gonococci, although the pus from the urethra did. The pus from the prostatic abscess showed pure cultures of staphylococci.

Instrument for Cocainising the Deep Urethra.—Dr. L. Bolton Bangs presented this instrument, using in it a preparation called "neurococaine," made by Schieffelin, pure pellets of it being very soluble in the

natural moisture of the urethra. With this instrument Dr. Bangs could deposit the pellet at any spot in the urethra, and anesthetization of the part rapidly followed. The best time for operating was from five to six minutes after the pellet had been deposited. The major portion of the prostatic urethra could be thus anesthetized, but more than one pellet might be necessary. Each pellet contains 1-12 grain of pure cocaine.

Dr. J. Bentley Squier had had some practical experience with the instrument, and laid emphasis upon the necessity of keeping the pellet perfectly dry until deposited. Even before introducing it into the instrument it should be perfectly dried.

Apparatus for Suprapubic Drainage of the Bladder.

—Dr. Ernesto S. L. Blascutti presented this apparatus.

New Method to Aid in the Detection of Stone in the Ureters and Kidneys.—Dr. Follen Cabot, Jr., said that although several methods for detecting stones in the ureters and kidneys were spoken of, it occurred to him that the sense of hearing could be utilized for this purpose. Accordingly, with the aid of the stethoscope first, and then later the phonendoscope, he had devised an instrument which he believed would be of considerable assistance. A whalebone bougie, thirty inches long and with a blunt end, was placed in the catheter and one end received into the diaphragm of a phonendoscope. The slightest sound of a stone could be detected accurately by this means. This was simply a preliminary report and the result of considerable experimental investigation.

Concerning the New Electro-Cystoscope.—Dr. William K. Otis said that the invention of the new electro-cystoscope has completely revolutionized our methods of diagnosis in vesical disorders, even extending to a determination of some of the lesions situated in the kidney itself, giving definite information regarding conditions which formerly could only be surmised, and may well be considered one of the great advances of modern surgery. The credit of this brilliant invention belongs entirely to Dr. Max Nitze, of Berlin. It differs entirely in principle, design and scope from any method for the ocular examination of the bladder which preceded it, and subsequent instruments have been modifications of this one. Over twenty-five years have passed since the first cystoscope was presented to the profession, and although the incandescent light has been added since its invention no one has succeeded in improving the ocular apparatus, and the cystoscopes of to-day are no better than those made in 1887. The electro-cystoscope presents many difficulties in the making; not only does the workmanship require the most experienced and skilled mechanic, but one who thoroughly understands the construction of electrical instruments and has a thorough knowledge of optics and the ability to construct and even originate a complicated ocular system. With the aid of a skilful electrician Dr. Otis had been able to present in 1899 the first electro-cystoscope manufactured in this country and until this time it was impossible to have one repaired without sending it abroad. One of the faults of the instrument was the difficulty of securing a larger field. After many experiments and many failures this obstacle was overcome by entirely eliminating the prism and substituting in its place a hemispherical lens, the plane surface of which was silvered, a portion of the circumference filling and closing the window in the outer tube of the instrument. This overcame the objections pertaining to the use of the prism as a means of diverting the rays, enlarging the field, and increasing its illumination. Dr. Otis then presented an instrument which resembles in general the cystoscope of Nitze, but differs from it in

several important features. It consists of two separate parts, the external catheter, or sheath, carrying the illumination, and the internal, or telescope, in which the entire optical apparatus is contained. The lamp is of peculiar construction, of wonderful brilliancy and freedom from heat. One pole of the lamp is carried on the metal shaft itself, the other by a specially insulated wire, and permits of the use of a telescope several sizes of the French scale larger than that of other instruments, thus allowing the passage of a greater amount of light with a corresponding brilliancy of field. Dr. Otis described the difference in insulation compared with the Leiter instrument, and showed how the mechanism of his lamp was manipulated. He also described the ocular apparatus, and said that after the instrument is well in the bladder if the fluid in the bladder becomes cloudy on account of bleeding or the presence of pus it is only necessary to remove the telescope, the sheath acting as a large catheter permits the rapid withdrawal of the fluid contents of the bladder, which can be refilled, the telescope replaced and the examination continued without the loss of a great deal of time, and without removing the instrument. This is much more effective than the so-called irrigation cystoscopes. To describe this complicated instrument in detail was unnecessary, as it is the practical advantages that interest surgeons, and in this cystoscope these are: A field having an area four times as large as that of any other rectangular cystoscope, so that it is practically impossible to overlook a pathological condition in the bladder. The field is clearer and brighter on account of the more powerful illumination of its lamp, the greater caliber of the telescopic tube, and the arrangement of the lens system. The lamp has such a low amperage that it emits very little heat, making it quite impossible to scorch or, as has happened, to seriously burn the bladder wall. This cool, powerful lamp, together with the protection of the lens from being smeared during introduction, permits the use of air as the examining medium, whenever it is considered advisable. The short beak and the absence of the flat top and sharp angular sides of the prism render it easy of introduction and less liable to cause bleeding. Should the medium in the bladder become clouded it can be rapidly withdrawn and replaced without removing the instrument. The exquisite workmanship of the instrument will challenge comparison with foreign cystoscopes of the first class.

CHICAGO MEDICAL SOCIETY.

Stated Meeting, held March 8, 1905.

General Blastomycosis.—Dr. Daniel N. Eisendrath exhibited a case of general blastomycosis. Beautiful examples of the organisms of the disease were obtained from the ulcer on the patient's leg by Dr. Ormsby. He said the disease was first brought to our attention some seven or eight years ago, since which time there have been quite a number of cases recognized and reported. The disease is characterized clinically generally by one lesion, but with more or less general infection. It is characterized locally by the fact that the edges of the lesion are raised, sharply demarcated from the surrounding normal skin. These contained a number of small miliary abscesses. Another characteristic of the surface was a peculiar wart-like or papillomatous condition of the ulcer. It was upon this, even without a microscopical examination, that the diagnosis of blastomycetic dermatitis was made, concurred in by eminent dermatologists, and the patient brought to the Cook County Hospital. The patient was a Bohemian, forty years of age,

and first noticed a small, circumscribed abscess which appeared upon the left side of the chest, which healed after the use of medicine, patient noticed an ulcer forming upon the place where the largest ulcer existed at the present time—the posterior surface of the right limb. This had gradually enlarged. Patient had an ulcer of the typical blastomycetic type on the left heel, two on the right leg, one of which was large. He had an abscess that formed spontaneously upon the anterior aspect of the right elbow; and some characteristic warty excrescences covered by some crusts under his chin. The author discussed the differential diagnosis of this disease from tuberculosis verrucosa cutis, from carcinoma and syphilis.

Diffuse Septic Peritonitis Following Appendicitis.—Dr. Eisendrath presented three patients illustrating the progress surgeons were making in the treatment of diffuse septic peritonitis complicating appendicitis. These patients were operated on at a period ranging from twenty-four to seventy-two hours after the onset of the disease. In one of the cases perforation occurred into the free peritoneal cavity. In one there was no perforation of the appendix, but there was a virulent type of appendicitis which was generally recognized as streptococcic, with general invasion of the peritoneum. These patients could not have been saved, he said, five years ago with the methods then in vogue, and the profession had to thank one man for helping us to improve the percentage of recoveries in these cases—Fowler, of Brooklyn, who, in 1900, published a paper in which he recommended the Fowler position in operations for diffuse septic peritonitis, together with flushing freely with salt solution, inserting drains, and instead of letting the patients lie flat on their backs, propping them up in bed or elevating the head of the bed, the object being that pus would not gravitate toward the diaphragm where the large lymphatics were, and by inserting drains in the pelvis one could get rid of the pus more quickly than by any other method.

Hodgkin's Disease.—He showed a well-marked case of Hodgkin's disease, which he intended to subject to the X-ray treatment. Dr. Eisendrath also reported a case of skin-grafting by the Wolf method; a case of encapsulated tubercular peritonitis, and a case of non-development of the testes in a man, thirty years of age.

A Case of Aortic Insufficiency.—Dr. Rosalie M. Ladova read a paper with this title, in which she quoted a case. The patient, Mrs. W. S., American, aged fifty-two years, housewife, family history negative. Personal history: At the time of the Civil War the patient sought medical advice for attacks of dyspnea, and was then informed of a heart lesion. She had recurring attacks of dyspnea, but had no medical attendance until January, 1903, when the attacks increased in severity, and edema of the lower extremities reached above the knees. Recovery followed, and she was without medical supervision again until January 6, 1904, when Dr. Ladova saw her for the first time. She found her in a state of extreme dyspnea and cyanosis, with a pulseless wrist and subnormal temperature; restlessly tossing herself in a vain effort to get her breath, with a look of despair in her eyes. She was a picture of distress. For the stertorous respiration, the heart sounds were inaudible; the cardiac impulse could not be felt. Under stimulation and the use of the morphine she rallied and was much improved; the attacks recurred on the tenth and eleventh; she became unconscious and delirious; while her pulse responded to stimulation, her mental state remained the same, and she died in the evening of the eleventh. Contrary to instructions, patient was fed fer-

mented preserved peaches and corn starch pudding, which undoubtedly precipitated the end. Pulsation in the carotid and thyroid arteries; throbbing in the superficial veins of the neck; cardiac impulse diffuse; pulse 76; not of the water-hammer variety; temperature 94.4° F.; respirations 26; apex in the sixth interspace in the nipple line; only a moderate degree of arteriosclerosis; heart dulness from the third rib to sixth interspace in the nipple line, one inch to the right of the sternum; lower border about two fingers' breadth below the costal arch. Moist mucous râles in posterior lobes; diastolic murmur at the aortic area, heard all over the precordia, transmitted down the right border of the sternum; round ulcer on the anterior surface of the thigh. Urine showed a trace of albumin, otherwise normal. Pathological diagnosis—post-mortem—showed insufficiencia valvulæ aortæ, hypertrophia cordis; atheromatosis aortæ; emphysema pulmonum; oedema pulmonum; hydrothorax dextra; concretio pulmonis sinistrae cum pleuræ perietalis; hydro-pericardium; infarctus hemorrhagicus pulmonis dextrae; tuberculosis obsoleta apicis sinistrae; morbus Bright's chronicus; hyperemia mechanica hepatis et lienis; myomata uteri; pelvio-peritonitis obsoleta; hydrops ascites; gastritis chronica; epithelioma cruris dextrae; anasarca et marasmus universalis. The clinical interest in the case centers in the almost miraculous recovery, in view of the post-mortem findings, from an extremely severe attack of angina pectoris, and impending paralysis of the heart, and in the probable further improvement, frustrated by a dietic error. Other unusual features were diffuse transmission of the murmur within the precordia and its limited transmission outside of the same; pulse not intermittent and not of the water-hammer variety, quickly responding to simulation; impaired temperature sense. Etiology, outside of only a moderate arteriosclerosis, lacking. This lesion is rare in females. Of 53 cases collected by Babcock, there were only 7 in females; urine normal with a distinct renal lesion; extreme multiplicity of post-mortem findings.

Complete Perineal Prostatectomy by Young's Technic.—Dr. Jacob Frank read a paper on this subject, in which he reported two cases. The first case, Mr. C. B., aged seventy years, consulted him May 15, 1904, complaining of having been troubled with frequent and painful micturition for nine months, passing very little urine at the time, and after having had to resort to the use of the catheter several times at intervals during this period, he had been compelled to lead daily catheter life for the past five months, suffering agonizing pains, insomnia, anorexia, loss in weight, a great deal of residual urine, quantity in twenty-four hours, 58 ounces, specific gravity 1.023, with albumin present, no sugar, abundance of pus cells, and also some squamous cells. Reaction was acid; no blood; urea 2.1 per cent. in twenty-four-hour specimen. The albumin reaction was thought to be due to the presence of pus. The family and personal history otherwise negative. Patient has double inguinal hernia and lipoma in the right groin. He was sent to the German Hospital May 29, 1904; put to bed; kept on a strict liquid diet; urotropin, 5 grains, was administered every four hours; lithia water given in abundance; boric acid irrigation of the bladder daily at a temperature of 110° F., and the daily use of the prostatic catheter, as the soft rubber catheter could not be introduced. Normal salt solution twice daily per rectum, as the patient was emaciated and required careful preparation. The gland could easily be palpated through the abdomen, especially per rectum. The lateral lobes were greatly enlarged, as was also the median, and not very tender, not as hard and immovable as the one in the second case. The operation was

performed June 2, 1904, four days after admission to the hospital. Young's method was used, and chloroform anesthesia employed. The patient was put in the exaggerated lithotomy position; a grooved sound as a guide for urethrotomy was introduced into the urethra; an inverted-shaped incision was made, the apex of which was just over the posterior bulb, and the two arms, each about five centimeters long; midway between the anus and ischial tuberosities. After exposing the superficial muscles by blunt dissection, the central tendon was caught by a clamp near the bulb and divided; this freed the sphincter and levator ani from their anterior attachments, and exposed the rectum, drawn forward by the recto-urethralis muscle. This muscle was then divided and the membranous urethra brought into view. This latter step not only exposed the membranous urethra, but prevented injuring the rectum. After exposing the membranous urethra, the muscles were retracted and the apex of the prostate brought into view. The membranous urethra was opened on the previously introduced grooved sound, and the edges retracted with transfixed silk retractors. A No. 30 French sound was then introduced through the urethral incision into the prostatic urethra and bladder, and the sphincter dilated with an easy to and fro motion of the sound. The prostatic tractor, closed, was then carried into the bladder, while the edges of the urethral wound were held apart by the silk sutures. As soon as the beak of the tractor was free in the bladder, the thumbscrew, which fixes the blades in position, was loosened, the blades rotated 180° by means of the external blades, and fixed by tightening the thumbscrew. The instrument was then handed over to an assistant, who made enough traction on the instrument to bring the gland clearly into the field. Lateral retractors were now placed so that, together with posterior retractors and the traction produced by Young's tractor, the entire posterior surface of the gland was exposed. The capsule was now incised to a depth of 1 cm. on each side of the median line for almost the entire length of the posterior surface of the gland, the two lines being convergent, the widest part measuring 1.8 cm., the narrowest, 1.5 cm. The bridge of tissue contains the ejaculatory duct, and hence in some of Young's patients sexual potency was not impaired. By means of blunt dissection, and with the aid of Young's forceps, the right and median prostatic lobes were enucleated piecemeal. The left lobe was enucleated *in toto*, measuring 5 by 8 cm. The tractors were then withdrawn, and a double drainage tube introduced into the bladder through the opening in the membranous urethra, the inlet tube being about one-third the size of the outlet tube. This double tube was fastened with a suture to the upper angle of the perineal wound. The lateral cavities left by the enucleation prostatic lobes were packed with plain gauze, and the drainage tube connected with a siphonage arrangement, and continuous irrigation with normal salt solution, 110° to 120° F., thus kept up, the flow being regulated by means of a screw clamp in the inlet tube. The irrigation was commenced on the table to prevent blood clots forming within the bladder. On the second day after the operation the patient developed an orchitis on the left side, very likely due to the extreme force used by the assistant in making the traction. The swelling was successfully treated with ice-bags, and elevation of the scrotum. The rectal temperature for the first week ranged between 100° and 103° F.; pulse between 78 and 98. The temperature was due very likely to orchitis, and also to the temperature of the irrigation fluid flowing so near the rectum. No shock. Pain for the first few days was relieved with one-quarter of a grain of mor-

phine administered hypodermically. Two hypodermic injections in all were used. On the second day the gauze packing was loosened, and some of it withdrawn every day until the sixth day, when all of the original packing was removed, and the superficial wound kept open thereafter with a small gauze pack. The patient was allowed to sit up in bed with a backrest on the fourth day. At the end of the week the continuous irrigation was stopped, and the drainage tube withdrawn. On the ninth day a No. 28 French sound was introduced through the urethra into the bladder, when a soft rubber catheter was carried into the bladder through the meatus, fastened, and the bladder irrigated twice daily with boric solution through this catheter. Five days later the catheter was withdrawn, no urine yet coming through the meatus, as the perineal opening was too large. On the nineteenth day the patient voided some urine through the meatus, but most through the perineal opening. From this day on the patient passed more urine daily through the natural channel, and at the end of the fourth week most of the urine passed through the natural opening at intervals of every two hours. With a 30 or 31 French sound his urethra was sounded every other day, and irrigated once every day after the second week. In five weeks after the operation the patient left the hospital with a very minute perineal fistula, which was dressed daily. At the end of the sixth week all was healed, patient urinating every three to four hours. The urine was quite clear, and there is no residual urine. He enjoys very good health, eats and sleeps well, and has gained considerably in weight. He was impotent before the operation, and is so now. Dr. Frank narrated another case in a man of sixty-two years, in which the result following Young's method was very satisfactory.

Chloride Retention in Nephritis.—At a recent meeting of this Society, Dr. Joseph L. Miller read a paper in which he said that a review of the literature since Widal and Javal's original communication showed quite uniform confirmation of their views, that patients with acute and chronic parenchymatous nephritis have marked inability to eliminate chlorides. As a result of the retention, the patient increases in weight, due to edema. The albumin in the urine, following the ingestion of ten grams of sodium chloride daily is increased and the patient may develop symptoms resembling uremia. In animals with artificial nephritis the use of salt increases the albumin. The organs of patients with nephritis show excessive sodium chloride. Kovesi has shown that nephritis after the ingestion of large amounts of NaCl do not perspire, due to increased osmotic pressure of the blood, and the edema is the result of this retained fluid. As it has been shown that ingestion of large amounts of salt may increase the edema, due to portal obstruction, cardiac insufficiency, and even the inflammatory edema, many believe the chloride retention is of extrarenal origin. The author has studied two cases of acute and seven of chronic parenchymatous nephritis. The chlorides were estimated by the Salkowski-Volhard method for nine consecutive days. For three days in the middle of this period the patients received in addition to their food ten grams of sodium chloride daily. All showed a retention of ten to twenty-five grams during the three days. The edema became more marked, the patients gained in weight, and the amount of albumin increased. Two patients showed uremic symptoms following the extra sodium chloride. Four normal individuals were examined in the same manner, and all showed a chloride retention equal to the nephritis. They also gained in weight. From this it is concluded that

these patients developed an undetectable edema, while in the nephritics, with the tissues already waterlogged, a moderate increase in edema could be detected. These patients did not show any albuminuria or uremic symptoms. As a final conclusion, in this matter, there is no doubt that the sodium chloride should be restricted in nephritis. The broths and soups contain very large amounts of salt. That furnished the patients in Cook County Hospital contains 11.3 grams per liter. Subcutaneous injections of salt solution must be used with caution, if at all.

Present Limitations in Serum-therapy.—Dr. H. T. Ricketts read a paper on this subject, and said that inquiry into the value of diphtheria antitoxin and of tetanus antitoxin revealed the fact that the latter fell far below the former as to its therapeutic value. The antitoxin treatment of tetanus might be considered hopeless, at present. However, observations and investigations showed that there might be a brighter future for it; but subcutaneous injections of tetanus antitoxin had given poor results. Intracerebral injections of the antitoxin of tetanus reported by Roux had not been given a sufficient trial for one to judge of the actual therapeutic merits. The chief value of tetanus antitoxin was its prophylactic use, as it had been clearly demonstrated that if the antitoxin of tetanus was given to a patient in whom there was any suspicion or likelihood of the development of tetanus, the disease did not develop. A striking example of this was seen in Fourth-of-July wounds. In some of the Eastern hospitals, patients who had received wounds on the Fourth of July, and had been injected with tetanus antitoxin as a prophylactic, did not develop the disease. In a hospital in Prague, a threatened epidemic of tetanus was controlled by giving prophylactic injections of tetanus antitoxin to all inmates in the institution. The therapeutic value of diphtheria antitoxin was so well established and known that little or nothing need be said regarding it.

Bactericidal Sera.—In regard to bactericidal serums, practically no results of value had been obtained in the treatment of established infections by antityphoid serum, anticholera serum, or antiplague serum. Published statistics did not warrant the conclusion that so-called bactericidal serums were of any value in treating diseases. Antistreptococcic and pneumococcic serum were of very little value.

Plague and Late Cholera Epidemic in the Philippine Islands.—Dr. Paul C. Freer, Superintendent of Laboratories of the Philippine Islands, stated that the Philippine Islands had been visited by two cholera epidemics before American occupation, one in 1882, and the other in 1888, and in these years the mortality was very high. In Manila alone the records showed that there were as many as a thousand cases at one time, and proportionately a number in progress. Both of these epidemics were serious, and so far as could be discovered very little was done to check them. During both of these epidemics Manila had no water supply except from wells, and it was after the second epidemic of 1888 that one of the former Governor-Generals gave a donation to start the Manila water supply works, which was completed afterward. The third cholera epidemic occurred during the American occupation, and about three years after Americans landed on the Islands. Before speaking of the measures which were taken to limit the spread of the disease, Dr. Freer referred to the organizations in the Philippine Islands and the scant means at hand for limiting the epidemic. He also mentioned those who took an active part in stamping out this epidemic. In order to secure complete cooperation, the Philippine Commission established a Board of Health. This was composed of a Commissioner of Pub-

lic Health, a Secretary, who was a Filipino, a Chief Health Inspector, and a Sanitary Engineer, who took charge of the engineering department, and a Superintendent of Laboratories. When the Board of Health was organized in 1901, it found itself practically without means. It had plenty of financial means, but it was without ambulances; it had no contagious disease hospital; it had no disinfecting wagons, and, in short, organization was very incomplete. Means of transportation were very poor, although these in times of epidemics were very important. The Board of Health undertook the work of equipping itself and preparing for future work. The City of Manila was divided into seven districts, each in charge of a medical officer, who were taken from the contract medical service. These officers, together with a corps of medical inspectors, began a system of house to house inspection. At this time the most serious disease confronting them was bubonic plague. They were having a number of cases a day, although the number had diminished markedly since American occupation. Still it was serious, and a recrudescence of the epidemic was feared, and for this reason the energies of the Board of Health were devoted toward diminishing the plague epidemic. Many of the facilities acquired for controlling the plague epidemic were put to good use subsequently in dealing with cholera. Three weeks after the organization, a large barracks was constructed which would hold twenty-five hundred people. This was for the sole purpose of isolating plague patients.

When plague occurred in a house, the patients were taken from it to the hospital, thus leaving the premises free for disinfection, etc. About December, 1901, three months after the plan was first discussed, there were constructed six barracks, which would accommodate a thousand people comfortably, and during the cholera epidemic they took in as many as twenty-four hundred at one time. The Board of Health procured eight or nine ambulances and equipped itself as well as it could with disinfecting apparatus, etc. Whenever plague was suspected to exist in a certain house, a member of the laboratory staff was called in for diagnosis, and if the case proved to be plague, the patient was taken to the hospital, or, if he died, to the morgue, and a radical alteration of the house undertaken, either its destruction by fire, if beyond repair, or complete rebuilding. It became necessary to destroy and rebuild whole districts in the city, altering the houses, putting in new floors and walls, new windows, and in this way plague was eradicated completely from the districts where it was prevalent. The main weapon against plague was the destruction of rats. The Board of Health undertook this work and in the first month destroyed about two thousand rats, after which the number ran up to as much as twenty thousand a month. Fifty thousand rats were caught in the first three months. A very large number of rats were examined at the laboratory for the plague bacillus. Two hundred and seventy-two rats were found to be infected with plague and had come from various houses, and one-half of the houses infected with these rats were found and treated in exactly the same way as those houses in which there were human beings infected with the disease. These houses were disinfected, even burnt down, if necessary, or altered. They managed to diminish the number of cases of plague by these measures, so that in March, 1902, there was not a case of plague in the city, nor had there been one for three weeks.

Epidemic of Cholera.—With reference to the epidemic of cholera, the Board of Health, before the confirmation of the diagnosis by culture in the first two cases of cholera, had taken measures as if they were

cholera. The patients were isolated in a contagious disease hospital, poor as it was. The next morning there were five more cases, the following day twenty more, and before the end of the month there were over a hundred and sixty, with two or three cases coming from one particular district in the city. The houses in districts in which cholera was most prevalent were burnt first and the property appraised afterward, as it was found that it would take at least two weeks to appraise the property. Two thousand people were taken out of the infected district and transported in wagons, ambulances, etc. By carrying out these measures there was very soon a great diminution in the number of cases until finally the disease was entirely controlled and eventually wiped out.

Prophylactic Sera.—The question of prophylaxis and of the use of sera having become a serious one, a serum laboratory had been established, and under the Bureau of Laboratories, where formerly everything was imported from Japan, this laboratory now made all of the antitoxins and sera necessary for work in the tropics, including rinderpest serum, which was the largest item of all. The Board of Health had procured new ambulances, had enlarged its disinfecting corps, and had perfected district organization.

Tricuspid Obstruction; Report of a Case Associated with Mitral and Aortic Lesions.—Dr. Joseph M. Patton, in a paper on this subject, spoke of the frequency, etiology, morbid anatomy, symptoms and diagnosis, and prognosis of this condition, and cited an interesting case which was under the care of Dr. C. B. King, who furnished the history: Patient, M. H., aged twenty-four years; father died when she was two years of age. Mother died at patient's birth. No brothers or sisters. Married at the age of fifteen years; never pregnant. First saw patient in spring of 1900. At that time she was suffering from incompetency, exhibiting some edema of feet and limbs; lips and fingers purple, shortness of breath, and pain in precordial region radiating into both arms. The heart was greatly enlarged; apex seventh interspace, three inches outside nipple line; right ventricle one inch to right of sternum. There was a double murmur at both aortic and mitral openings. The first aortic sound was so loud and rough that it covered the whole of the front of the chest. She responded quickly to strychnine and digitalis; the edema of feet and limbs disappeared, and during the following summer she got along very well, doing some housework. The following November she again suffered from lack of compensation; edema of feet, limbs and lungs, and severe pain radiating to the fingers of both hands. Ventricles dilated, left reaching to midaxillary line; unable to lie down, eat or sleep; urine very scant and loaded with albumin and casts. Ordinary dosage of strychnine and digitalis produced no reaction; dosage increased at this time to digitalis, 17 drops, every two hours; strychnine, grains $\frac{1}{16}$, every two hours, for three days. At this time Dr. J. M. Patton saw her in consultation. Digitalis had produced nausea by this time, and a change was made to digitaline (Merck's German pure), grains $\frac{1}{16}$, every three hours, was given. In a few days there was a gradual response. Kidneys gradually improved, heart became competent, digitalis and strychnine reduced to $\frac{1}{16}$ of a grain of each three times daily. The following March she was able to leave the house and appeared at Dr. Patton's clinic. Since then, during the warm weather, she got along very well unless she became negligent with the strychnine and digitalis. At times she would go several weeks without medicine. During cold weather she had more trouble. In September, 1903, she spent the month in the woods of Wisconsin, and seemed to improve a great deal. During the

winter of 1903 and 1904, she had two or three slight attacks of incompetency, but responded quickly to full dosage of strychnine and digitalis. In June of 1904 she suffered a severe attack of incompetency, and entered St. Luke's Hospital, was there for about six weeks, and from there she went to Grove House, Evanston, and remained there until about the middle of December, 1904. While there she had no medicine, except the supply that was given her on leaving St. Luke's, and which was soon exhausted. He saw her again on December 23, when she was suffering from all the symptoms of incompetency. At this time she did not respond to the large doses of strychnine and digitalis. December 27, she entered Mary Thompson Hospital, and died there December 29. Although the patient had recognized her physical limitations from childhood, she gave no definite history of rheumatism. He first saw the patient in November, 1900. Inspection showed forcible, heaving heart impulse, which moved the whole of the antero-lateral portion of the left side of the chest wall. There was some systolic pulsation at the second and third interspaces at the left of the sternum. The cyanosis was very slight. Dyspnea was marked.

Palpation determined the apex impulse to be approximately in the seventh interspace in the anterior axillary line, the impulse being so diffuse that accuracy in location was impossible. The character of the impulse was distinctive of extensive dilatation of the left ventricle. A mitral presystolic thrill was felt midway between the mammillary and anterior axillary lines. It did not extend to the right of the mammillary line. A systolic thrill was felt at the area of pulsation before mentioned. There was no thrill along the left edge of the sternum. Jugular and hepatic pulsation were absent. Percussion determined the lateral limits of cardiac dullness at the level of the fourth rib to be one and one-half inches to the left of the mammillary line on the left, and one-half inch to the right of the right sternal border on the right. Auscultation determined double aortic and mitral murmurs. The aortic systolic murmur was unusually loud and rough, and was transmitted over almost the entire front of the chest, being particularly pronounced from the second to the fifth ribs along the right parasternal line. The other murmurs had the usual characteristics, their points of greatest intensity being modified in accordance with the change in position of the heart. The diagnosis was in accordance with these findings, moderate dilatation of the right auricle and slight tricuspid regurgitation being recognized. The possibility of a tricuspid lesion was considered, but nothing definite was recognized. The autopsy, at which Dr. Patton was present, was made by Dr. King fourteen hours after death. There was considerable fluid in the pleural cavities, and a moderate quantity in the pericardial sac. No evidence of pericarditis. The heart weighed twenty-four ounces (normal for women, ten to twelve ounces). It showed extensive hypertrophic dilatation of the left ventricle, moderate of the right ventricle, marked dilatation of the left auricle, and considerable dilatation of the right auricle. The aortic opening is irregularly oval in shape, and measured $1\frac{1}{4}$ by .5 cm. (average for women .9 inch). The upper surface of the ring presents an irregular, hard, rough ridge, without evidence of valvular structures. The inner surface is sharp and rough, while the lower is rough, irregular, and presents near the edge of the opening a calcareous vegetation a quarter of an inch long by about one-eighth in height. The whole ring is calcareous and of almost bony hardness. The mitral opening is oval in shape, and measured 2 cm. by $\frac{3}{4}$ cm. (normal for women, 1.2 inch). The upper surface of the ring is hard and smooth, the inner surface rough. The valves are thickened, rigid,

with rough thick edges which form an almost continuous ring. The tricuspid opening is almost round and measured $1\frac{1}{2}$ by .7 cm. (normal for women, 1.5 inch). The upper and inner surfaces of the ring are rough, irregular and hard. The valves are thick, retracted, and partly adherent at their bases. The cavity of the left ventricle measures five inches, from base of valve cusp to apex of cavity (average for women .3 inch). The wall measures over one inch in thickness near the base of the ventricle (normal, one-half inch), and one-half inch at the thinnest part of apex (normal, one-quarter inch). The left auricle is much dilated and its walls are one-eighth inch thick. The cavity of the right ventricle measures $3\frac{1}{2}$ inches (normal for women, $3\frac{1}{2}$ inches); its wall is one-half inch thick. The right auricle is somewhat dilated and its wall is one-twelfth inch thick. The physical changes in the heart in this case explain and are in accord with the clinical symptoms, which were those of aortic and mitral disease, and not at all indicative of tricuspid lesion. The absence of any hypertrophy of the right auricle shows that the tricuspid lesion had no such effect on the auricle as had the mitral lesion on the left auricle. While the tricuspid lesion is of considerable pathological interest, it has little bearing on either the clinical history and symptoms or on the physical changes in the heart. In these respects the case corroborates the majority of cases previously recorded, and illustrates the fact that tricuspid lesions have, as a rule, less clinical importance than other valvular lesions, and especially than those with which they are associated.

KENSINGTON BRANCH PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, held March 7, 1905.

The Chairman, Jas. C. Chestnut, M.D., in the Chair.

The Treatment of Retroflexion of the Uterus. Based on Records of 653 Cases.—Dr. Barton Cooke Hirst read this paper, and stated that out of over 6,000 cases of diseases of women that had come under his observation in private practice, and at the Howard and University Hospitals, he had done over 1,400 plastic operations and 653 cases were treated for retroversion of the uterus, 506 of which were subjected to operation. He stated that the physician should consider three questions before advising operation or operating: (1) Is operative treatment satisfactory? (2) Is the physician justified in operating? (3) What form of operation should be used, in relation to each individual case? He believed, in young married women and in working-women, operation should be advised if there was no contra-indication, but in a case of adherent retroversion with exophthalmic goiter pessary treatment would be preferable. He also stated that some cases may be cured by the pessary, and in many cases it is necessary to use it for a time at least. He stated that the best method of procedure was the modified Alexander operation, as it presented the least proportion of recurrences and least difficulty in subsequent pregnancies, but can be used only in uncomplicated cases. The suspension method, he stated was the most generally available, the percentage of failures was small, and in the cases examined there were only three recurrences and in only one of these was there any congestion of a serious character. The vaginal fixation operation, he stated, had the highest percentage of failures and was the most difficult. The Jacksonian procedure of utilizing the coronary ligament he considered worthy of consideration. The cases of acute displacement following a sudden jolt, he recommended be treated without sup-

port. He cited two cases, one of a young woman who fell down a flight of stairs resulting in complete backward displacement of the uterus and another in whom the displacement was caused by a fall over a tub; in the former the uterus was in good position six months after replacement, and in the latter four years. The third case was that of a married woman who on examination after childbirth was found to have complete retroversion of the uterus. No supports except dry tampons were employed, and she was examined nine months later and found to have complete retroversion of the uterus. He recommended that during the puerperal period the patient be examined at the beginning of the fourth week, and if the uterus is out of place, it should be replaced, if necessary, by putting the patient in the knee chest posture, and pessary and tampons should be introduced, if necessary, after six weeks, and the treatment should be accentuated by Swedish movement and massage. Three cases, each of which had retroversion following several deliveries and were cured by the treatment outlined were cited. He referred to four cases in which the retroversion had been cured by subsequent pregnancy. Operation should not be done immediately following childbirth. He stated that he believed hard rubber was the best material usually available for pessary; aluminum he believed to be a good, exceedingly light and does not corrode, but difficult to obtain, and the pessary should be only just large enough to retain the uterus in position. The pessary should be removed once in eight weeks and cleansed by the physician, and vaginal douche of boric acid solution should be taken on the two days following menstruation and once between the periods. He referred to a case which he examined, in which the symptoms pointed to cancer; after removing a pessary the symptoms disappeared.

Ventrosuspension Operation.—Dr. Frank C. Hammond stated that while there were many operations for this condition, there was none that could be called an ideal one. He stated that he was glad to see that the author used the ventrosuspension operation. The operation of shortening the round ligament, he stated, did not give good results, and the Alexander operation he did not look upon as satisfactory, as it requires two incisions, which, if nothing else would increase correspondingly, the likelihood of subsequent hernia and also the likelihood of complications in subsequent pregnancies. He referred to a case which had come under his observation at the Samaritan Hospital in which a woman, forty-three years of age, in whom a fixation had been done two years before by an operator outside of Philadelphia, followed by adhesions which finally required another operation. He referred to another case which he had examined in which the woman had worn a pessary for two years for backward displacement of the uterus, and when he examined her it was found to be upside down, the woman reporting that she had repeatedly taken it out and washed it and re-inserted it herself. He believed the pessary would give good results in selected cases, but before it is employed, we should ascertain (1) whether the uterus is pregnant and (2) we should make sure that it is free from lacerations and inflammatory disease. He referred to a case in which a physician had diagnosed ante flexion and introduced a pessary, which the patient could not wear, and she went to another physician who diagnosed backward displacement and also introduced a pessary. The patient then came under the speaker's care, and examination under ether revealed a fibroid in each anterior wall. He also referred to the uselessness of the employment of the pessary in cases of rectocele and

cystocele, without correction of the condition. He also called attention to the fact that in a certain percentage of cases of headache and backache, which were otherwise unexplained, backward displacement of the uterus was the cause.

Dr. Chas. L. Leonard referred to a case which was diagnosed as pelvic disease, in which examination under the X-ray revealed an imbedded pessary.

Dr. Shaller referred to a case in which a ventrosuspension had been performed three years ago at a hospital and proved to be a marked failure, because of the fact that the patient was at that time suffering from a tear of the perineum and cystocele and rectocele, and emphasized the importance of attention to such conditions.

Obscure Fractures Diagnosed by the X-rays.—

That paper was read by Dr. M. K. Kassabian, who, after referring to the progress made in the various lines of medicine, stated that he considered that the Roentgen rays were the most important discovery of recent years from a diagnostic and therapeutic standpoint. He referred to the fact that subjective and clinical symptoms were not always present, in which cases the X-rays were particularly valuable as a diagnostic agent. The advantage of this method of diagnosis were cited as: (1) It is painless. (2) There is no necessity to wait for the diminution of swelling or for the removal of the bandages. (3) In addition to the positive diagnosis, it is possible to reveal the exact nature, position, shape and size of the fracture, and to differentiate between the fractures and displacements. Among the conditions in which it can be used with particular advantage were named fractures, epiphyseal conditions, displacements of the bones, tendons and joints, osteitis and periostitis, tumors of the bone, diseased joints, etc. He then exhibited a large number of lantern slides showing the practical application of the methods outlined in the paper, including fractures of the bones in all parts of the body, diseases of the joints, periosteum, etc.

Dr. Chas. L. Leonard felt that Dr. Kassabian had failed to sufficiently emphasize the importance of the X-ray in making a negative diagnosis of fractures, thereby avoiding the necessity of keeping the limb in splints for a considerable period, in addition to being able to immediately apply the proper treatment for the consideration. He referred to a case which had come under his observation, suffering with pain in the lumbar and cervical spine, and who had been walking with a crutch and cane, who was said to have had a fracture of the tibia and possibly injury of the hip sixteen years previously. Examination under the X-ray revealed no injury to the hip, nor was there any fracture of the tibia, but there was about half an inch of shortening of one leg. Examination of the shoes he was wearing showed that in one pair he had a correction of an inch and a half, and in the other pair an inch and a quarter, which overcorrection had produced curvature of the spine. The correction in the shoes was reduced to the proper amount, the man was sent to Atlantic City for a couple of weeks, at the end of which time he returned to the city with absolutely no pain, and a week later went to his home with no pain and the only correction was a half inch in that shoe. In regard to the accuracy of diagnosis, he laid especial emphasis that it was possible to tell whether or not a joint was involved, and also what was necessary to be done in order to preserve the functional power of the joint, and also emphasized the value of the X-ray in medicolegal work, and exhibited a number of slides illustrating the various points of his discussion.

Dr. Franklin Brady emphasized the value of the X-ray in the differential diagnosis of intracapsular fracture, and referred to a case where a man had been kept in bed three weeks with his leg elevated in a plaster-of-Paris cast, supposedly for a fracture, when examination by the X-ray at the end of that time revealed that no fracture existed.

Dr. Kassabian, in closing, referred to the fact that the diagnosis of hip-joint condition, was difficult on account of the thickness of the parts, and stated that he always tied the feet together and took a skiagraph of both hips at once, so that if there was any deformity due to fracture it would show.

BOOK REVIEWS.

MEDICAL DIAGNOSIS, a Manual for Students and Practitioners. By AUSTIN W. HOLLIS, M.D., Attending Physician to St. Luke's Hospital, New York, and to the New York Dispensary; Physician-in-Chief to the St. Luke's Hospital Out-Patient Department. Series edited by Victor Cox Pedersen, A.M., M.D., of New York. Illustrated with 13 engravings. Lea Brothers & Company, Philadelphia and New York.

CONDENSATION is from the medical student's point of view, much to be desired; but the task of compressing the whole practice of medicine, including nervous diseases, into "epitome" size might properly be placed among the superhuman efforts. For the best of authors must fail to do himself or the subject justice, when he is compelled to limit himself to a series of headings with a few brief paragraphs following each.

Still, as a pocket-book to serve for rapid review, after the subject has been studied out of a "proper" text-book, we know of none better than this volume; for, in spite of the obvious difficulties of the task, the work is extremely well done. The sections on diseases of the chest, infectious diseases and nervous diseases are perhaps the most comprehensive. The book is printed on thin paper and can be easily carried in the pocket.

ESSENTIALS OF THE PRACTICE OF MEDICINE. By WILLIAM R. WILLIAMS, A.M., M.D., formerly instructor in Medicine and Lecturer in Hygiene, Cornell University Medical College; Tutor in Therapeutics, Columbia University (College of Physicians and Surgeons), New York. Double Number. W. B. Saunders & Company, Philadelphia, New York and London.

SUCH an extensive use of these Question-Compends means that they in some way meet a want; and there is no doubt that when well-written they are commendable *aide-memoires* or "ready reviews" for the hard-worked student.

The great difficulty of the author of such a brief work is to cover any subject at all; for space limits him to the merest dogmatic statement, without modification or suggestion of other possibilities. This author has wisely followed the classification of the standard text-books, and has devoted himself to making an abstract of each article therein contained. He has not gone afield for new things, or the methods of the specialist, but has given us a concise and simple résumé of those things which are standards in Physical Diagnosis, Nervous Diseases and General Medicine. The brevity is most noticeable under the head of Treatment, where often a single line or perhaps two is all the direction one gets, as in Arthritis Deformans, Mumps or Bell's Palsy. The symptoms, however, are particularly well abstracted, and give the book real value.